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1982
Commodity Year Book

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INTRODUCTION

At midyear of 1982 commodity markets were concerned with: the ongoing recession; continued high interest rates; industrial and agricultural commodity prices which, in many instances, were below production costs; international political unrest, which had erupted into armed conflict in some areas; and a growing tendency in many nations towards trade protectionism. Developments in these and other areas will affect the production, distribution, and prices of many commodities in the months ahead. An understanding of price and supply/demand characteristics for specific commodities and groups in past years is essential to the evaluation of factors which shape the price outlook. Feature studies, statistical tables, charts, and specific information in COMMODITY YEAR BOOK 1982 are designed to aid in the appraisal of commodity price prospects for the commodities covered in the following pages.

Efforts by the Soviet Union to maintain livestock and poultry numbers in order to provide adequate meat protein in diets, following three consecutive poor crop years, draw attention to the longer term prospects for shortage in world food and feed grains, and to the outlook for soybean meal—the world's key high-protein feed. In a provocative study "Prospects for Global Food and Feed Shortages in the 1980s," Robert E. Fink examines the broad range of factors that will affect both the supply and demand for food and feed in the 1980s. The author offers an opinion on the long run supply/demand outlook, focusing on certain factors which have the potential for bringing about serious price instability. Mr. Fink is Assistant Vice President of Heinold Commodities, and has been a previous contributor to Commodity Year Book.

Although there are alternative high protein feeds, soybean meal plays a dominant worldwide role as a source of high protein in feed rations. The soybean complex trader should have a basic understanding of the major types of protein feeds, the nutritional requirements of livestock and poultry, and of protein feeding rates in order to evaluate demand and price prospects for soybean meal. These factors, as well as the political and economic considerations which have influenced the use of U.S. soybean meal in the recent past, and those factors likely to influence its use in the future are discussed in Richard A. Loewy's feature study, "The Expanding World Demand for U.S. Soybean Meal." Mr. Loewy is Senior Grain and Oilseeds analyst for Bache Halsey Stuart Shields, Inc.

The timely feature study "Interest Rates and Commodity Prices" by Allan R. Ermann examines the relationship between interest rates and various commodity prices during periods of economic strength and weakness. It explains why interest rates have considerably more influence on commodity prices at some times than at others. In this era of volatile interest rates, this study should be very helpful to those who trade in commodities. Mr. Ermann is a Senior Analyst for Commodity Research Bureau, and is also on the editorial board of the Commodity Year Book.

Now that many industrial and agricultural commodity prices have declined to the lowest levels in two years or more, the feature study "Futures Market Strategy for Consumer Goods Corporations" is particularly appropriate. It is at such times that corporate management responsible for purchasing is most likely to consider "locking-in" raw material costs through the purchase of futures contracts. This unique study shows how futures may be used to implement corporate strategy relating purchasing operations to sales and marketing policies. Its author, William J. Johnson, is president of Reef Points, Inc., a management consulting firm located in Allentown, Pa. which specializes in corporate futures activity.

We again wish to express our appreciation for the assistance furnished us by governmental agencies, commodity exchanges, various trade associations, and other organizations. We have attempted to list all of these institutions on page 4.

The Editorial Board
May 1982

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International Silk Association
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United States Department of Interior
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United States Treasury Department
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THE COMMODITY PRICE TREND

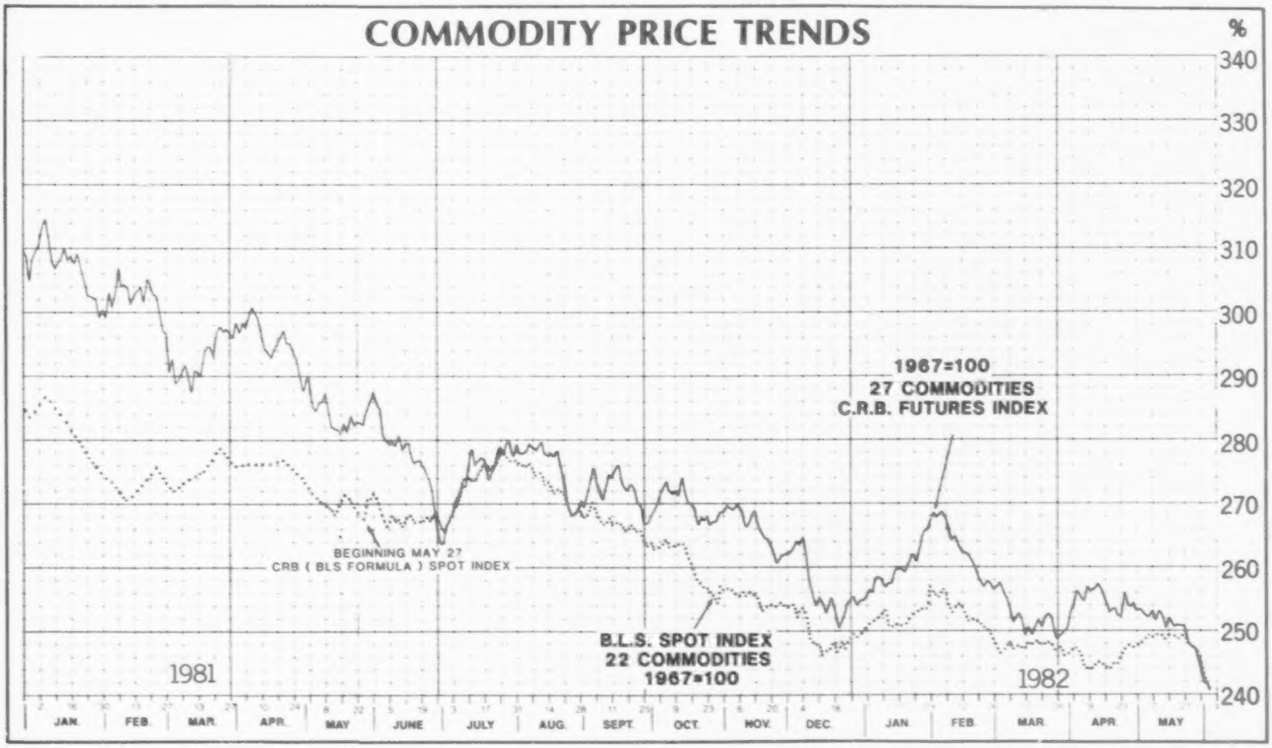
The general commodity price level, as measured by the Commodity Research Bureau Futures Price Index and the CRB (BLS-Formula) Spot Index—which replaced the discontinued (as of May 26) Bureau of Labor Statistics "Tuesday Spot Market Price Index"—declined during 1981. The downward price trend was interrupted only briefly by recoveries in March and in July. The March rally was influenced in part by a surprisingly low USDA pig crop report which helped livestock and grain prices and by the Polish crisis. The late July recovery was sparked by strength in coffee caused by the Brazilian freeze.

The CRB Futures Price Index in 1981 ranged between a high of 314.5 (1967 = 100) on January 6 and a low of 250.5 posted on December 21. The Index ended the year at 254.9 percent of its 1967 base, 17 percent lower than a year earlier and 24 percent below its all-time peak of 337.6 registered on November 20, 1980. The most significant year-to-year percentage decline was posted by the Metals segment of the Index, which dropped 34 percent, followed by the Industrials group which ended the year 23 percent lower than a year earlier.

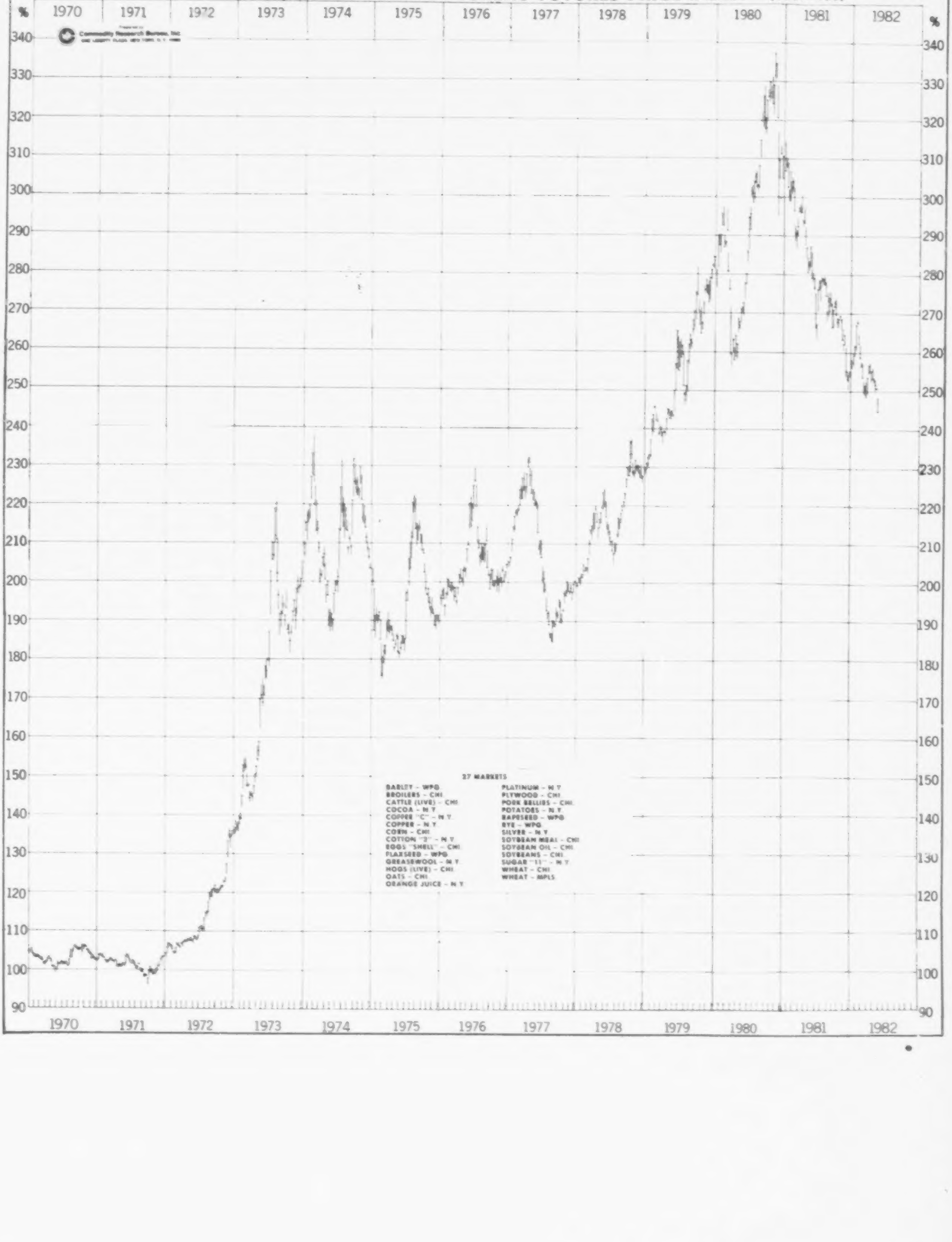
The CRB (BLS-Formula) Spot Index in 1981 ranged between a high of 286.6 (1967 = 100) registered on January 6 to a low of 246.2 on December 14, and ended the year at 250.0 percent of its 1967 base, 12 percent below the year earlier level. The largest year-to-year drop (15 percent) occurred in the Foodstuffs group. The Raw Industrials group declined 9.5 percent. These price declines paved the way for the first monthly drop (March 1982) in the Consumer Price Index (CPI) in 17 years.

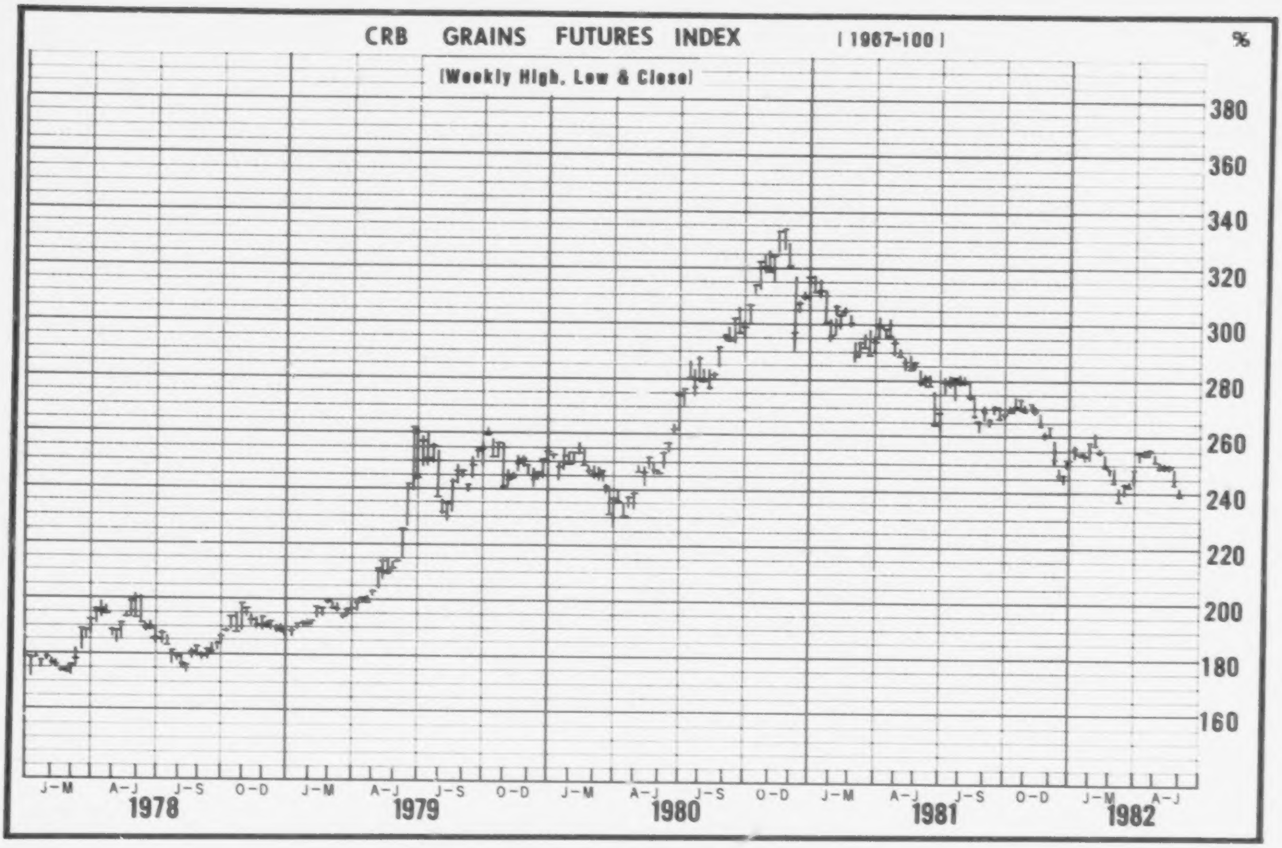
The CRB (BLS-Formula) Spot Index measures changes in the prices at which physical commodities are currently selling in the "spot" market, whereas the CRB Futures Price Index measures future expectations for the commodity price level based on futures prices up to a year ahead.

Important factors contributing to the major downtrend in commodity prices during 1981 were continued high U.S. interest rates, the generally strong U.S. dollar, and the deepening recession in the U.S. and in other important industrial nations. High interest rates, which exceeded the perceived rate of inflation, discouraged the acquisition and holding of commodity inventories. In addition, the high interest rates diverted some investable funds from the purchase of commodity futures to high-income producing financial market instruments. In foreign exchange markets, the strong U.S. dollar (relative to a year earlier) contributed greatly to reduced export demand for many U.S. commodities. And, the depressed state of the bellwether U.S. auto and residential construction industries adversely affected demand for a wide spectrum of commodities.



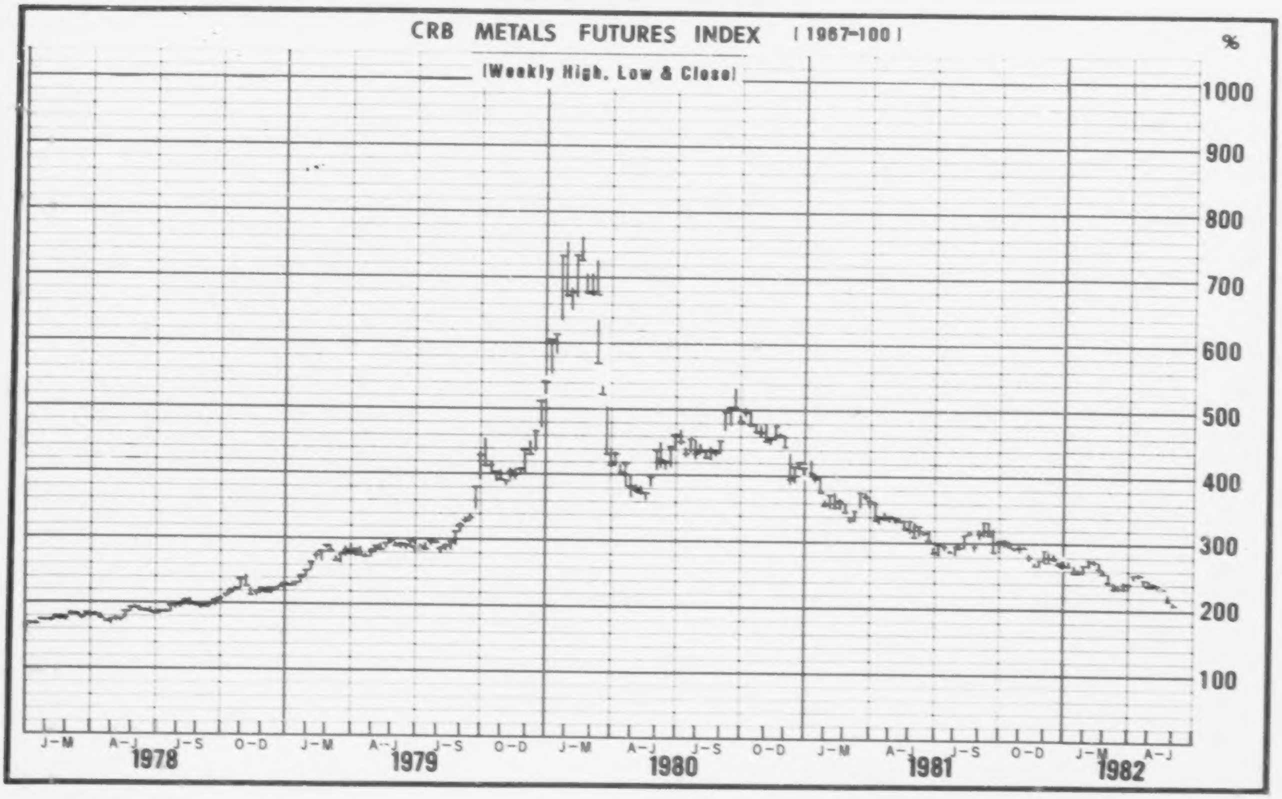
COMMODITY RESEARCH BUREAU FUTURES PRICE INDEX (1967=100)





CRB GRAINS FUTURES INDEX (1967=100)

(Weekly High, Low & Close)



CRB METALS FUTURES INDEX (1967=100)

(Weekly High, Low & Close)

PROSPECTS FOR GLOBAL FOOD AND FEED SHORTAGES IN THE 1980s

BY ROBERT E. FINK

Introduction

Almost ten years have passed since world food and feed prices were catapulted to the post-war highs by a supply crisis of unprecedented dimension. It is widely believed that the shock of the 1973/74 price increase constituted a dramatic and fundamental turning point in the world food economy, one characterized by an ever-tightening balance between supply and demand. This belief has been the basis for growing speculation that another crisis of the 1973/74 variety is inevitable during the coming years. Some economists have gone so far as to suggest that grain will be the "oil market of the eighties," with the United States holding the upper hand in a new era of politically-directed food and feed grain exports.

This study seeks to examine the prospects for global food and feed markets in the coming years, with emphasis on two basic questions: (1) What are the realistic chances of a severe food and feed shortage in the eighties? (2) What set of factors could lead to another grain supply crisis?

The study begins with a brief look at the historical developments that led to this 1973/74 turning point in food and feed economies and an examination of the major features of the transition phase. From there it provides a discussion of the broad range of factors that will affect both the supply and demand for food and feed in the years ahead. Finally, it offers an opinion on the long run supply/demand outlook and those factors that have the potential for bringing about serious price instability.

Historical Perspective

To gain a clearer perception of the forces that will influence the supply/demand balance of food and feed in the years ahead, let us first review the longer term historical stages that led to the period of transition that began in the early seventies. In the United States, the roots of our present agricultural situation extend back to the transformation of this country from an agrarian economy to one that is primarily industrial. Before World War I, a large portion of the population was engaged in agriculture. However, by the end of the War, improvements in technology relating to farming methods transformed farming into a highly productive, highly competitive sector of the economy. Production expanded rapidly, but demand for farm products lagged. The result was oversupply, high agricultural unemployment, low returns and low agricultural commodity prices.

This disequilibrium was to plague agriculture for many decades to come. Soon after the First World War, worldwide depression further aggravated the farm problem. U.S. government policies were developed to support domestic farm prices above prevailing market levels. The governmental intervention, however, produced unintended adverse effects. Farmers responded to the price supports by producing even more, and consumption (restrained by the higher prices) became even more sluggish.

Despite the Second World War, and later attempts by policymakers to constrain production, agricultural disequilibrium persisted into the 1960s. By then, large stocks of surplus grain had accumulated under government ownership. The competitiveness of U.S. farm products in world markets had been badly weakened by high U.S. price supports, and the costs of U.S. government domestic intervention became unsustainable. Around this time, governmental policies were modified (by reduced price supports) to limit the interference of price supports with the free movement of the market. This marked the beginning of a trend toward "the eventual separation in 1973 of commodity price support from income support and the use of different programs to pursue objectives independently."(1)

The Years of Transition

Changes in governmental policies and the slowly accumulating effect of improving world demand brought about major changes in the world food and feed economy by the early seventies. A much closer balance between the supply of and demand for agricultural products was gradually evolving. Growth in both population and income, along with a heightened awareness of hunger and malnutrition, were placing greater demands on production—particularly U.S. output. Also, the shift by some centrally-planned economies from net exporters to net importers added further demand pressure. At the same time, increases in U.S. farm output had begun to slow from the impressive gains of the previous decade.

The concurrence of a number of events beginning in 1972 caused an abrupt and massive change in the world supply/demand balance for food. Prolonged drought in Africa and parts of Asia reduced production; adverse oceanic changes crippled Peru's fishmeal output; in the United States, heavy rains threatened harvests; foreign exchange rate realignments increased the competitiveness of U.S. products in foreign markets.

But the most significant change occurred in the Soviet Union. Adverse weather had reduced production to levels well beneath domestic requirements, and the U.S.S.R. responded with an aggressive change in policy by importing unprecedented tonnage of grain from the United States. The result was an almost instantaneous shift in the United States from agricultural surplus to shortage. And, while the period of shortage was brief, it provided a dramatic beginning to the turbulent years that followed.

Chart 1 shows the ratio of world coarse grain stocks to utilization for the period 1960/61 to 1981/82 and depicts the sharp decline into the mid-seventies:

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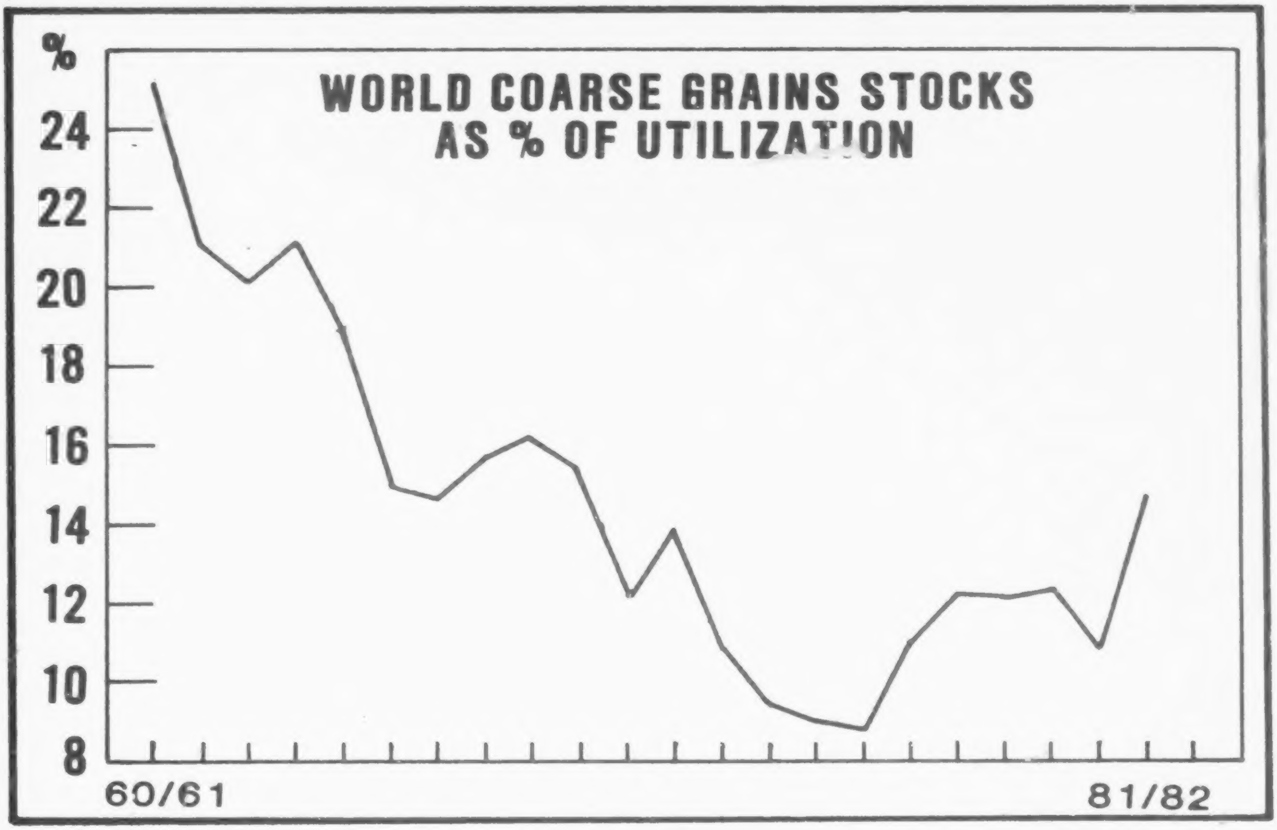
(1) Reference numbers correspond to sources of information listed at end of article.



The primary factor responsible for the elimination of surplus grain stocks has been the world's growing appetite for animal protein. Dennis Avery of the U.S. State Department has pointed out that the demand for livestock has a multiplier effect on grain consumption since it takes about two kilos of grain to produce a kilo of poultry; 3.5–4 kilos of grain to produce a kilo of live hog, and even more for beef production.(2) One point of interest is that while agricultural productivity made great strides in the past four decades, the record of productivity in converting grain to meat was far less positive. Table 1 shows that since 1940 more feed has been needed per unit of beef and pork. This diminished efficiency is probably the result of the speeding up of the fattening process and prohibitions against the use of certain growth hormones.

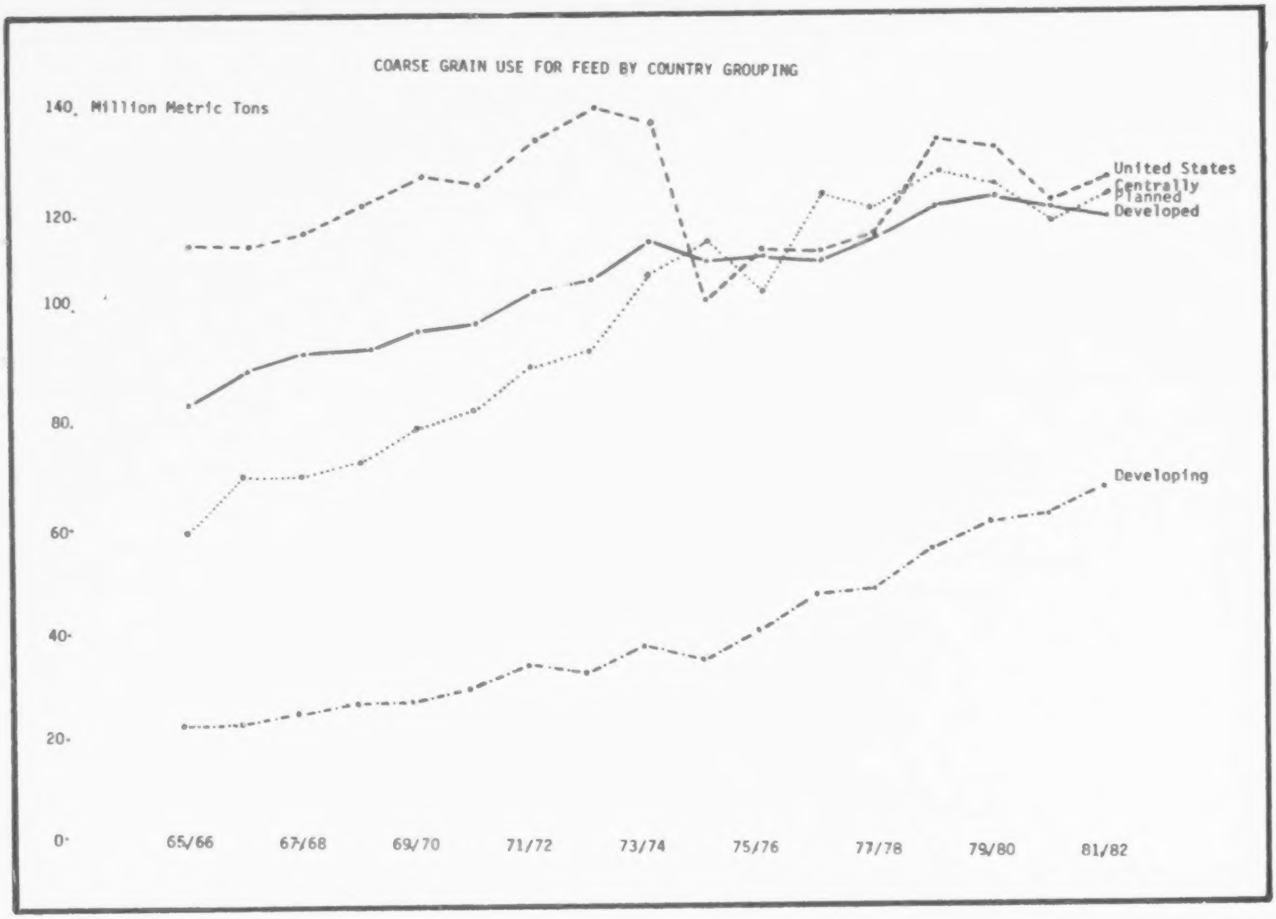
The Increased Demand for Livestock Products

The increased world demand for feed by livestock has been the main cause of rising grain use during the seventies and eighties. To meet this rising demand, there has occurred a notable shift in land use toward coarse grains and oilseeds which produce higher feed value per unit of land. Avery points out that "while world wheat and rice production increased 138% in the last 30 years, world feed grain production has increased 215%."(2) Around the world, improvements in human diets have been brought about by increased livestock feeding and consumption. Most of these improvements have been the result of economic growth and, in the case of centrally-planned economies, by massive grain imports. Chart 2 shows the growth that has occurred in world feed grain use since 1965/66.

TABLE 1
Units of all feeds consumed per units of production

Year (3-year averages)	Units of all feeds consumed per units of production					
	Milk per cwt.	Beef per cwt.	Pork per cwt.	Broilers per cwt.	Turkeys per cwt.	Eggs per 100
	(pounds of feed, measured in corn equivalent)					
1940 (2-yr. ave.)	108	975	530	473	723	61
1950	112	959	537	374	569	61
1960	117	1,025	587	293	572	54
1970	109	1,120	584	253	513	57
1978 (2-yr. ave.)	107	1,398	659	228	404	56

Source: U.S. Department of Agriculture, Agricultural Statistics, 1962, 1972, and 1980.



The emergence of the "livestock factor" during these transition years can be viewed in either of two ways: (1) that increased consumption of grain by livestock has virtually eliminated surplus stocks and put the supply and demand of grain in precarious balance, or (2) that the worldwide inventory of animals has replaced grain stocks as a measure of world food availabilities. The latter view would imply that the livestock numbers represent a buffer during periods of supply imbalance—being liquidated in periods of grain shortage and being built in periods of surplus.

An example of this buffer role for livestock occurred in 1980/81 when the Soviet Union harvested a grain crop that was far short of food/feed requirements and the United States suffered a major drought which cut feed grain and oilseed output by 55 million metric tons (tonnes) from the previous year's level. Instead of causing a major crisis, the principal impact of the grain shortfall was a cutback in feeding and herd size in the Soviet Union, a reduction in feed use in the United States, and a relatively moderate rise in world grain prices.

Although the livestock buffer worked reasonably well in 1980/81, as a long run mechanism of world food security it seems to have several potential weaknesses: (1) livestock herds are liquidated only with great reluctance and do not provide immediate food relief during times of extreme shortage; (2) some of the world's most grain deficient regions do not have livestock to liquidate, and may be the victims of severe supply dislocations; (3) the livestock buffer mechanism has not been tested during a several-year period of grain production shortfall. If livestock liquidation has a moderating impact on grain price increases during periods of shortage, does it also tend to eliminate the incentive to increase grain production to more normal levels following shortages?

No matter what importance we attach to the new role of livestock numbers in the world food system, it is clear that the seventies and eighties stand in sharp contrast to the previous two decades. As O'Brien points out, the recent years have been marked by increased volatility in consumption and production as well as a marked increase in world food trade.(3) He indicates that "five of the eight largest shortfalls and windfalls in world food production and disappearance were reported between 1972 and 1980." In addition to this heightened volatility, the world became increasingly dependent on the performance of a few exporters, particularly the United States. During the seventies, the U.S. alone accounted for 51% of the increase in world wheat exports and for about 89% of the increase in coarse grain exports. The United States now supplies about 43% of world wheat exports, 70% of coarse grain exports, and 84% of soybean exports.

Table 2 provides a statistical overview of world trade in wheat, coarse grains, and rice:

TABLE 2

Wheat & Wheat Flour		Coarse Grains*		Rice	
World production 1980/81 (in million tonnes)					
U.S.S.R.	98.1	U.S.	198.7	China	139.3
U.S.	64.5	W. Europe	94.9	India	79.9
EC-10	55.0	China	82.5	Indonesia	29.8
China	54.2	U.S.S.R.	80.7	Bangladesh	21.5
E. Europe	34.5	E. Europe	61.6	Others	124.8
India	31.8	Others	207.2	Total	395.3
Others	100.5	Total	725.6		
Total	438.6				
World exports 1980/81 (in million tonnes)					
U.S.	41.9	U.S.	72.4	Thailand	3.1
Canada	17.0	Argentina	9.8	U.S.	2.8
EC-10	14.0	W. Europe	7.3	Pakistan	1.1
Australia	10.4	Canada	4.6	Burma	0.8
Others	10.2	Others	11.0	Others	5.2
Total	93.5	Total	105.1	Total	13.0
World imports 1980/81 (in million tonnes)					
U.S.S.R.	16.0	W. Europe	21.0	Korea	2.2
China	13.8	Japan	18.9	EC-10	0.9
Japan	5.8	U.S.S.R.	18.0	Iran	0.6
E. Europe	5.8	E. Europe	11.0	Saudi Arabia	0.5
Others	52.1	Others	36.2	Others	8.8
Total	93.5	Total	105.1	Total	13.0

*Coarse grains include corn, barley, oats, sorghum, millet and rye.

Factors Affecting Production

The world's ability to meet the rising demand for food depends on a wide range of factors. Since 1796, when Malthus put forth the idea of limited land resources available to satisfy unlimited population growth, running out of productive land has been a constant and often overstated source of concern. More recently, new technologies such as the attempted development of plants which thrive on salt water have played a role in expanding the limits of agricultural production. In this section, we will examine the major factors affecting the output of food and feed grain and attempt to assess the contribution each is likely to make to world supply in the years ahead.

Land Availability—In the United States, crops were planted on about 390 million acres in 1980. This represents roughly one-third of all the land area in farms and ranches and a little more than one-sixth of the total land area of the country. A study conducted by the Soil Conservation Service (SCS) in 1977 estimated that 377 million acres were being used for crops (338 million harvested, 9 million of failed crops, and 30 million of cultivated summer fallow). Adding to this 20 million acres of idle land and soil-conserving crops and 16 million acres for short-term rotation, the SCS arrived at a readily available cropland base of 413 million acres. Thus by 1980, 95% of this base was in active use.

Between 1910 and 1980 U.S. farm output increased 250%, while crop acreage remained relatively constant. This outward stability in land area masks a number of very important underlying trends: Until the 1950's, most acreage harvested produced crops for domestic consumption. From 1930 to 1955, only about 10% of the crops harvested went to the export market. Since 1955, however, U.S. acreage used for exports has grown steadily so that it now accounts for more than a third of the total. Another important U.S. trend involves the regional redistribution of production. In the last three decades, cropland in the Corn Belt and Delta regions increased substantially, but these gains were offset by almost equal losses in the Northeast, Southeast, and Southern Plains. Expansions in the Delta region stemmed from extensive drainage and land clearing while those in the Corn Belt came from conversion of pastures to cropland. By 1980 almost 25% of the cropland in use was concentrated in the Corn Belt. Another 25% was in the Northern Plains.

Two important factors have tended to oppose a trend toward increases in overall U.S. cropland. One is the persistent loss of land to urbanization. A recent study suggested that almost a million acres a year during the seventies were converted to urban use. However, most observers seem to think this conversion rate has slowed in recent years and that, at the present pace, additional losses to urbanization will be a negligible problem. Of greater concern, perhaps, is the loss of land and/or productivity to soil erosion. Changes in farming methods, designed primarily to meet the growth in world demand for grain, have resulted in the widespread loss of topsoil at a rate faster than nature can replace it. A recent *Kiplinger Agricultural Letter*(4) reported that, in Iowa alone, 260 million tons of soil is eroded each year. Policymakers will be paying increasing attention to this serious problem in the years ahead, attempting to strike a balance between the high costs and output-limitations of soil conservation and the desire to maintain our lead role in world grain trade.

How much of the United States land area beyond the 413 million-acre cropland base is available to be converted to crop use in the event of world grain shortages and sufficient profit incentive? The best answer to this difficult question, and the one most widely accepted by economists, comes from the 1977 SCS study which estimated that there are 36 million additional acres of high-potential cropland and 91 million of medium-potential land available for conversion. Although most of the high-potential area is evenly distributed among the major farm regions, evidence tends to suggest that the most likely sources of additional cropland seem to be the Corn Belt and Delta regions, where about 9 million acres of potential crop area exist. High-potential land in the remaining parts of the country would require considerable investment in draining, clearing, irrigation, etc. On balance, it seems safe to estimate that a total of 10 million acres could be added to the production base with little difficulty under circumstances of only moderate profitability. This would represent an increase of less than 3% in the total cropland base, 95% of which is already in use.

However, to convert more than these 10 million acres would probably require a significant shift in the cost-price relationships for crop production. How much of a shift is difficult to say, but one 1976 survey estimated that a ratio of 100 in the prices received by farmers to the prices paid had the potential of adding some 40 million acres to crops over a period of several years. Since 1976, however, farmers have drawn on the stock of pastures so today's potential conversion at a ratio of 100 may be considerably smaller. In any case, it seems certain that prices received by farmers will have to average well above the rate of general inflation to permit an expansion of more than, say, 10% in the cropland base of the United States over the next several years.

Estimates for foreign land expansion potential are difficult to come by. Several studies suggest that about 25% of the ice-free land of the world is suitable for cultivation and that at present about half of this is cultivated. The highest potential for crop area expansion is in Latin America and, to a much smaller extent, Africa. With the exception of parts of South America, however, major conversion of foreign land to productive crop use will be achieved only with great difficulty.

Use and Availability of Water—The use of irrigation to reduce the risk of seasonal or prolonged drought and to ensure crop quality has increased steadily over the years. It is estimated that 12% of all cropland in the United States is irrigated, the overwhelming majority of which is in seventeen Western states. Irrigation has played a role in the growth of feed output, particularly grain sorghum and corn in the High Plains region of Texas. The expansion in feed production gave rise to a surge in feedlots in this area. From 1960 to the mid-1970's, cattle feeding in the Plains grew from almost nothing to a level that accounted for nearly 40% of the beef produced in the United States.(4)

Needless to say, agriculture depends very heavily on water availability. Nearly 80% of all water consumed annually in the United States is accounted for by agriculture. Irrigation accounts for a large part of this consumption and is a relatively inefficient use of water. More than half of the water provided by irrigation systems is wasted on weeds, oversaturates the soil causing drainage and erosion problems, or returns to the source of supply for subsequent downstream use. Moreover, underground water reserves have been materially reduced by demands from irrigation.

Another threat to farm water supply is competition from non-farm water uses such as coal and oil shale development, and urbanization. Shifts in the population to the Sun Belt have placed greater demands on freshwater supplies in those areas. In addition, heightened public concern over water quality may serve to restrict the growth of water use and availability to agriculture. These and other factors imply that the development of new water supplies is likely to slow in the 1980's and that the use of water for U.S. agriculture will become more restrictive than it was during the previous three decades of rapid agricultural growth.

For the world as a whole, increased irrigation and population will hike the world's demand for water by 200–250% over the next fifteen to twenty years. Regional water shortages and deterioration of water quality, already serious problems in many parts of the world, are likely to become worse.

Yield-Enhancing Technology—As indicated earlier, the great force behind the growth in U.S. and world agriculture during the last fifty years was not fueled by the employment of more and more land. Technologies which increase output per acre have been and may continue to be the major long-run influences on agricultural productivity. According to the Department of Agriculture,(5) U.S. farm productivity grew by 2% per year from 1939 to 1960, but by only 0.9% per year from 1960 to 1970. Corn yields experienced rapid growth from the 1950's to the 1960's, but since then have tended to show much slower growth. These and other observations have provided the basis for widespread speculation that the U.S. farm is living off past technological breakthroughs and that the limit to agricultural productivity growth is rapidly approaching.

In both the developed and the developing world, *fertilizers* have played an increasingly important role during the last two decades. It has been estimated that fertilizers were responsible for almost 60% of the total increases in crop yields in the 1965–1976 period. The growth of fertilizer use in developing countries was 10–15% per year during the 1970's and probably 5–6% in the developed lands during the same decade. In the United States, fertilizer application grew from about a million pounds in the 1930's to more than 20 million tons by the late seventies. While domestic use is expected to increase during the eighties, it will do so at a slower rate. Generally, fertilizer supplies are expected to be adequate in the coming years but prices are likely to rise nevertheless. This could serve to slow the increase in application rates and add to farm production costs. Sharply higher prices were a major factor in slowing world fertilizer use and resultant food production in 1973 and 1974. The cost of energy will continue to influence fertilizer prices, particularly nitrogen, since production depends directly on hydrocarbon feedstocks such as natural gas, oil and naphtha.

Plant protection also plays an integral role in agricultural production. Fungicides and insecticides control diseases and insects that damage crops and livestock. Herbicides control undesirable weeds. In the United States, more than 90% of the major crop acreage is treated with herbicides. While growth in the application of these chemicals is likely to continue in the years ahead, the rate of increase will be well below that of the sixties and seventies, given their already extensive use. Other parts of the world are expected to increase their use of plant protection chemicals at a forecasted rate of 4% per year over the next decade. However, use in developing countries may be inhibited by higher prices and the near-total dependence on imports from the relatively few manufacturers in developed countries.

While *machine power* has been a major factor in American agriculture for years, developing countries still have significant potential for expansion in this area. In 1980, machines were estimated to provide the power to cultivate about 25% of the world's harvested area. By 2000, their contribution is expected to rise to 50%. Tractor use is already reaching saturation levels in parts of Latin America and the Near East. Thus, it is in Africa and Asia that they will play the greatest role in raising productivity. Rapid growth in mechanization, however, depends on a combination of inexpensive energy and healthy local economies—both of which are presently in doubt.

This raises the still larger question of what role the overall economic and policy environment plays in increasing agricultural output. It is unarguable that one of the major forces behind the rapid build-up of U.S. agriculture was the massive influx of capital to the farm sector, which increased productivity and released labor for work in the industrial sector. A broad array of now-changed economic and policy factors supported this development. The U.S. agricultural system currently employs 20% of the nation's work force and accounts for some 25% of the gross national product. What effect will be created by such factors as inflation and recessions, high interest rates, expensive energy, slower economic growth, the breakdown of the family-farm, etc.—only time will reveal.

Weather—Another imponderable which has a major, if relatively short-term, influence on agricultural yields is weather. The unusual weather patterns of the past ten years—droughts, flooding, monsoon shifts, changes in winter's severity—have generated concern that global shifts in climate are taking place. Some regions—Australia, Canada, U.S.S.R.—experience wide weather-related fluctuations in production from year to year. Others, such as the United States and Europe, tend to be more stable. However, as the drought in the U.S. in 1980 demonstrated, weather can have a serious effect on output even in the regions of minimum variability.

A number of recent scientific (and popular) articles have argued both sides of the question: Is a major climatic shift in progress? Some argue that the earth is cooling; others the opposite. In either case, the weight of opinion seems to slightly favor the view that the climate of the past five decades has been favorable and that the coming years could well bring greater adversity.

However, since such forecasts are—at best—highly speculative, projections of future food production must rest on the assumption that normal weather will prevail. In this framework, one point is worth emphasizing: There tends to be a positive correlation between the effects of weather in one region of the world and those in another. An analysis of the world's major grain-producing regions(6) indicated that when grain yields suffer from bad weather in one part of the world, the chances are that they will suffer in other parts, too. Poor weather helped explain the major declines in food output in 1964–66, 1972, and 1974. One exception to this correlation rule occurred in 1980 when, despite major drought in the U.S., the world narrowly escaped a food supply crisis because most other producing regions had normal or better-than-average weather. The same study showed that for the period 1950–1973 weather in one year out of three could be expected to produce a deviation from trend production which is 50% greater than the expected deviation if randomness is assumed.

The last ten years have witnessed a marked increase in the inter-annual variability in world production and consumption of food. Five of the eight largest shortfalls and windfalls in world food production and disappearance were reported between 1972 and 1980.(3) Much of this was due to changes in weather conditions from one year to the next.

New Technologies—The last major factor affecting the outlook for agricultural production involves major technological breakthroughs. Technology is, as noted earlier, the major long-term influence on productivity trends. Such past developments as hybrid seeds were a major force in output gains. One study(6) identified at least three technologies having significant potential: (1) Twinning—enhancing multiple births in beef cattle through breeding and selection for genetic traits; (2) Bioregulators—using certain natural and synthetic compounds to regulate the ripening of horticultural products; and (3) Photosynthesis Enhancement—improving the process by which plants form carbohydrates through genetic selection.

These are but a few of the technologies that have the potential for raising agricultural productivity in the years ahead. However, it does not seem likely that any of the presently emerging technologies will be ready for commercial adoption before 1990.

Factors Affecting Demand

Two factors—population and income—are the chief determinants of the overall level of demand for world food and feed grain supplies. Other diverse considerations such as foreign exchange and the use of corn as a feedstock in ethanol production also have an impact (and will be discussed later). But first we will examine the roles of the two dominant forces affecting demand.

Population—While most demographers agree that the 1980's will be a period of gradually slowing population growth, they also concur on the assumption that enormous increases will occur in world population over the next ten to twenty years. The rate of population growth (currently 1.86% per year) is expected to drop to 1.79% by the mid-1980's and to 1.70% by the year 2000. Despite the declining rates, absolute population (now about 4.5 billion) will grow to 4.9 billion by 1985 and to a little more than 6.0 billion by 2000. Under a wide range of demographic assumptions, population is expected to increase (on average) some 83 million people per year between 1980 and 1985 and the number of persons being added annually will be significantly greater by 2000. This compares with average annual increases of 66 million people in the 1960's and 75 million during the 1970's.

Of great significance to world food trade is the fact that most of the population growth will occur in the less developed countries (LDCs) rather than in the industrialized nations. By 1985, LDCs will account for 75% of annual population growth and more than 90% by 2000. This trend in population has been accentuated with the passage of time. In 1960, the LDCs had about twice the population of the developed countries; by 1970 they had 2½ times as much; and by 1985 they are projected to have three times as much.

Population growth rates in the relatively affluent of the less developed countries should continue to decline and their annual gain in numbers of people should peak toward the end of this decade. However, in the low income developing countries—representing almost half of the world's population—growth rates are not expected to peak until the early 1990's and their annual increase in numbers will continue at record levels through the end of the century.(3)

Another important demographic trend within the LDCs is the expected dramatic movement of rural populations to cities and adjacent living areas. *The Global 2000 Report to the President*(7) says, "if present trends continue, many LDC cities will become almost inconceivably large and crowded." For example, by the year 2000 Mexico City is projected to have more than 30 million people. This rapid urbanization is likely to put extreme pressure on food and water supply systems in these countries.

TABLE 3
World population, actual and projected

Region or country	Compound annual growth rates 1960–70	1970–80	1980–85	Absolute population 1970	1980	1985	Annual increase in people 1960–70	1970–80	1980–85
	Percent			*Millions*					
Developed	1.09	0.79	0.75	708.4	766.7	796	7.3	5.8	5.8
United States	1.26	.83	.95	204.9	222.6	233	2.4	1.8	2.1
Canada	1.75	1.37	1.30	21.3	24.4	26	.3	.3	.3
Western Europe	.80	.42	.35	334.3	348.7	355	2.6	1.4	1.2
South Africa	2.69	2.50	2.45	25.3	32.4	37	.6	.7	.8
Japan	1.03	1.16	.80	104.3	117.0	122	1.0	1.3	.9
Oceania	2.08	1.67	1.55	18.3	21.6	23	.3	.3	.3
Centrally planned	1.85	1.48	1.20	1,216.6	1,408.7	1,494	20.4	19.2	18.5
Eastern Europe	.74	.69	.65	125.5	134.5	139	.9	.9	.9
USSR	1.26	.93	.95	242.8	266.3	279	2.9	2.4	2.5
China	2.21	1.74	1.30	848.3	1,007.9	1,076	16.7	16.0	13.6
Developing	2.47	2.49	2.50	1,792.1	2,292.2	2,592	38.8	50.0	60.0
Latin America	2.75	2.84	2.90	282.9	374.3	432	6.7	9.1	11.5
North Africa/Middle East	2.64	2.74	2.70	186.6	244.5	279	4.3	5.8	7.0
Other developing Africa	2.44	2.63	2.65	239.3	310.2	354	5.2	7.1	8.7
Developing Asia	2.44	2.32	2.30	1,059.3	1,332.4	1,493	22.0	27.3	32.0
Rest of world	2.67	2.53	2.45	24.0	30.8	35	.6	.7	.8
World total	1.99	1.86	1.79	3,717.1	4,467.6	4,882	66.5	75.0	83.0

Sources: U.S. Bureau of the Census, United Nations, and selected country sources.

Income—Along with population, which determines the "baseline" trend of demand, changes in aggregate income have a considerable impact on the overall consumption of food and feed grains. It can be said that income determines the variations that occur around the population-determined trend of demand. And these variations can be extremely important.

In general, as income increases a smaller proportion is spent for food. In most low income countries at least half of income is spent for food, whereas the share drops to less than 20% in the highest income countries. The response of demand to increases in income is known as income elasticity and it varies in a reasonably predictable way. Low income nations tend to be characterized by relatively high levels of incremental food consumption from increased income. This income elasticity declines steadily through the stages of development until in the more advanced, high-income countries the proportion of additional income spent for food is relatively low. The range of such income elasticities is estimated to extend from 0.9 at one extreme to 0.1 at the other.(8) For example, a country that spends 60% of its present income on food will, assuming an income elasticity of 0.9, spend 54% of extra

TABLE 4
World per capita income data, actual and forecast

Country or region	Compound annual growth rates 1960–70	1970–80	1980–85	1978 per capita income
	Percent			*U.S. dollars*
Developed:				
United States	2.8	2.0	1.8	9,700
Canada	3.4	2.8	2.3	9,200
Western Europe	4.2	2.6	2.2	5,900
South Africa	3.2	.6	.4	1,500
Japan	9.1	3.5	3.3	7,300
Oceania	3.2	1.4	1.4	7,350
Centrally planned:				
Eastern Europe	3.8	4.2	3.2	3,250
USSR	3.5	3.0	2.5	3,700
China	5.2	3.8	3.4	460
Developing:				
Latin America	3.2	3.1	2.8	1,190
North Africa/Middle East	N.A.	4.4	3.8	1,250
Other developing Africa	N.A.	1.6	1.3	360
Developing Asia	2.3	2.1	1.9	290

N.A. = Not available.
Sources: Organization for Economic Cooperation and Development, Project Link, and World Bank.

income on food; a country that spends 20% of its income on food and has a 0.1 income elasticity will spend only 2% of any incremental income. The implications for the future demand for food are significant. As more countries enter the rapid growth phase enjoyed by developed countries, demand for food products will increase sharply. Also, transfers of income from rich to poor nations have an important effect on demand since a far greater share of the transfer will be spent on food than would have been spent at home had the aid not been given.

Of course, income elasticities vary with the types of food being consumed: lowest for roots and tubers, a little higher for coarse grains for human consumption, and progressively higher for other grains and animal products.

While there are great differences in average income per capita between nations, there are also great differences in income levels within countries. This unequal distribution can play an important role in the amount of income spent on food. Josling(8) illustrates the point this way: For a country with per capita income of $500, an income increase of 4% per year enjoyed solely by the poorest 60% of the population might raise food consumption by 3.2% annually; however, if the extra income were distributed proportionately the increase would be perhaps 1.4%; and if given to only the top 20%, the increase in food expenditures would be only 0.26%. Thus, redistribution of income from rich to poor within a country can serve to increase consumption by large amounts.

Since aggregate income is such an important variable in the food consumption equation, we should attempt to assess the prospects for the world economy in the years ahead. While forecasts vary widely, most economists agree that the economic picture for the next several years will be less favorable than that of the sixties and seventies. World economic growth is expected to suffer from the persistent problems of inflation and unemployment. While an upturn was expected to begin sometime in 1982, growth during the recovery phase was not expected to reach the highs achieved following earlier recessions.

The causes of this dim outlook are widely known. Many economies have had to deal with the combination of worsening inflation and unemployment, and most are still faced with the difficult choice of easing one or the other. In addition, "the closer synchronization of the developed countries' business cycles and strong trade linkages tying their economies together have tended to worsen the situation by magnifying past upturns and, more important, the current downturn."(3) Other longer term considerations include higher energy costs, higher "input" prices, and lagging labor and capital productivity.

It is important to emphasize, however, that these negative forecasts depend in large part on the prospects for the fifteen or so developed countries which account for the bulk of world economic activity. As indicated in our discussion of both population and income, these developed countries are not necessarily the main determinants of the food demand prognosis. To get a clearer picture of the outlook in the developing countries, some current economic thinking seems to favor dividing these countries into oil-importing and oil-exporting categories. The oil-importing developing countries are expected to face marked contractions in economic growth and increases in inflation and unemployment. Conditions are likely to be worst in South Asia and sub-Saharan Africa. These most disadvantaged areas may suffer further from a slowdown in aid as donor countries adopt more austere budgets.

For the oil-exporting developing nations, the economic outlook seems somewhat better. Growth is expected to average only slightly less than the record rates of the 1970's in most of these countries. In other countries, such as Mexico, it is forecast to be higher. It is the rapidly-growing middle-income countries that offer the greatest potential for future food demand. Increases in both the quantity and quality of food consumed by these areas could generate increases in demand similar to those caused by dietary enhancements in the developed countries during the past twenty years.

On balance, it seems likely that demand for food and feed will grow at a rate below that of the levels of the seventies as reduced demands in the developed and low income countries are not fully offset by the expected higher needs of oil-exporting and other middle-income lands.

One factor has the potential to lift future demand beyond what can be expected on the basis of population and income forecasts. If real energy prices continue to increase, agricultural products may become an increasingly attractive source for energy production. Although the issue is still quite clouded, governmental programs and private sector efforts are likely to aid in expanding the production of ethanol for use in gasohol—with corn as the most probable feedstock. Presently, ethanol production capacity is limited by plant construction and it is unlikely that a major conversion of corn to fuel will occur by 1983. O'Brien(3) has estimated that by the 1982/83 season as much as 830 million gallons of ethanol production capacity could be available, and by 1985/86 the figure could reach 1,800 million. At current corn-ethanol conversion rates, ethanol production could account for 7 to 9 million metric tons of corn by 1982/83 and 14 to 22 million metric tons by 1985/86 in the United States.

Earl O. Heady, director of Iowa State University's Center for Agricultural and Rural Development, points out(9) that "the alcohol required for the average annual use of a U.S. automobile would feed about 23.5 people for a full year." If average annual exports of grain, oilseeds and rice had been used to produce ethanol, 11.5 billion gallons would have been provided—less than 10% of U.S. annual gasoline consumption, according to Heady. It is clear, then, that if the U.S. wanted to "go all out" in this area, the bolstering effect on crop demand would be enormous. At the same time, it would be rash to assume that either the incentive or the capacity exists to bring this about. All that can be safely stated at this point is that the diversion of corn to fuel use has the potential for raising domestic demand growth for corn to the peak levels of the sixties and seventies.

Several factors, in addition to the foregoing considerations play a role in determining the level of demand for food and feed commodities. Because they are so diverse and because they tend to have shorter-term influence than population and income, we will simply list them: Dietary preference, various government policies and international politics, availability of foreign exchange, processing capacity, transportation costs, shipping and port capacity, price, and competition from other crops.

Long Range Supply Demand Outlook

Based on our discussion of the factors affecting the supply of and demand for food and feed crops, it is possible to speculate on the general climate that will prevail in agriculture during the eighties. Most agricultural prognoses tend to agree that the world food production and consumption balance will become increasingly tenuous. This would tend to suggest an agricultural climate characterized by greater seasonal variability in price, greater trade, and still greater demand for U.S. exports.

It is worth noting that whatever improvements have occurred in the world food situation during the past twenty years have been due in great part to increased dependence on trade. In fact, food trade expanded at roughly twice the pace of growth in production and consumption. We should expect this trend to continue.

As far as demand is concerned, world consumption of agricultural products could expand at near record rates during the coming years. This is possible despite expected slowdowns in both population growth and economic activity.

The rate of increase in world food production this decade may slow to about three-fourths of the historical rate of the previous two decades.(10) Whatever increases do occur will be achieved only at significantly greater costs. From the end of World War II to the early 1970's, real prices of key agricultural inputs —energy, fertilizer, and water—declined.(11) The result was a record increase in crop yields. After the surge in energy and fertilizer prices, farmers depended more on bringing land into production and less on yield-increasing inputs. The result was that from 1972 to 1980 harvested cropland rose by 55 million acres, but the rate of yield increase declined to a little more than a third its previous rate. There can be little doubt that during the eighties higher input prices will be felt either in reduced productivity or higher agricultural product prices.

Another feature of the economic climate of the eighties is likely to be the growing dependence of the world on supplies from the United States. Some estimates suggest that U.S. exports may have to expand at a rate of 7 to 9% during the eighties to meet growing foreign demand. Few countries appear to be capable of supporting increases in their food consumption through increases in local production although Brazil certainly has this potential. In sub-Saharan Africa, to cite an extreme example, per capita food production over the past two decades has actually declined.

To summarize: The food-agriculture climate of the 1980's will be marked by continued strong demand, reduced production growth at higher costs, and a growing reliance on U.S. exports to meet demand.

To gain a clearer picture of supply/demand prospects, we have constructed a number of cases which assume a variety of growth rates in production and utilization. Coarse grains were selected because their expected demand growth is greater than food grains but less than oilseeds. The assumptions are fairly conservative, especially since the base year used in each case was 1981/82—one in which ending stocks increased by almost 20 million metric tons.

As is evident from Table 5, Cases I and II do not suggest the likelihood of a major supply crisis over the next four years. However, Case III—which assumes a decline in productivity and utilization growth slightly below the record rate of 3.2% per year—portends a severe tightening of the balance. In the 1973/74 bull market in grains, the stocks to utilization ratio dropped to around 9%. Case III suggests a trend that would eventually drive the ratio well beneath that level.

TABLE 5
World coarse grains (in million tonnes)

	Production	Utilization	Ending Stocks	Stocks as % Utilization
Case I—Assumes production & utilization growth equaling 10 yr. avg.				
1980/81	726.6	739.1	77.4	10.5
81/82	767.0	747.4	97.0	13.0
82/83	783.1	762.3	117.8	15.4
83/84	799.6	777.6	139.8	17.9
84/85	816.3	793.1	163.0	20.5
85/86	833.5	809.0	187.5	23.2
Case II—Assumes slow production growth & slow utilization growth				
1980/81	726.6	739.1	77.4	10.5
81/82	767.0	747.4	97.0	13.0
82/83	779.3	760.9	115.4	15.1
83/84	791.7	774.5	132.6	17.1
84/85	804.4	788.5	148.5	18.8
85/86	817.3	802.7	163.1	20.3
Case III—Assumes slow production & rapid utilization growth				
1980/81	726.6	739.1	77.4	10.5
81/82	767.0	747.4	97.0	13.0
82/83	779.3	769.8	106.5	13.8
83/84	791.7	792.9	105.3	13.2
84/85	804.4	816.7	93.0	11.4
85/86	817.3	841.2	69.1	8.2

Hazards on the Horizon

It is important to emphasize that the above projections are crude, based on simple linear extrapolations of assumed rates of change. Needless to say, the events of the last decade in grain markets have taught us that trends cannot be relied on over long periods of time. Along the way some previously unforeseen force frequently acts to cause a significant deviation from those assumed trends.

The cases shown do not take into consideration the inter-annual variability in production that may be caused by weather-induced crop failure. Considering that only five countries account for over 70% of coarse grain production, the risk that a crop failure somewhere could lead to a major supply crisis is substantial. In the last ten years, the United States has suffered two major crop shortfalls: 1974/75 output dropped 20% from the year before and 1980/81 production dropped 17%. In both cases, world grain supply crises were averted through heavy livestock liquidation and favorable growing conditions in other parts of the world. Climatologists tell us that weather conditions tend to be unfavorable to crops in approximately one out of three years and that the probability of two consecutive unfavorable years is about 50%. Given the gradual secular tightening of the food supply/demand balance, crop failures will have added meaning in the years to come. Two production shortfalls back-to-back or major crop failures in different parts of the world in any one season could have severe negative implications for world food security.

The demand side of the equation also poses some hazards. Our estimates of future utilization growth rates are based on realistic expectations concerning population and income trends. They do not take into consideration a sudden surge that could be caused by a synchronized world economic expansion. World economies have become more closely linked; changes in one country tend to reinforce similar changes in others. If the recent recessionary phase leads to a unified economic build-up and renewed inflation, growth in world food demand could easily exceed the record rates of the sixties and seventies. Also of concern is the almost incalculable effect of using agricultural products as a source of energy production. As noted earlier, a full-blown conversion effort would exert a heavy strain on our crop production systems.

Conclusion

There is much evidence that in the 1970's the state of agriculture switched from one of chronic surplus to one of more frequent shortage. Contrary to the 1950's and 1960's when U.S. farm prices fell relative to the Consumer Price Index, the 1970's saw the prices received by farmers rise 17% relative to the index.(12) This real price increase reflected the extraordinary growth in U.S. exports that was necessary to fill the widening gulf between foreign production and consumption. Most economic forecasts agree with the conclusion that this gulf will continue to widen, and that United States farms will be called on for greater and greater supplies in the years ahead.

Does the more tenuous world supply/demand balance suggest a recurrence of the kind of crisis that shook food and feed markets in the early seventies? Is another grain price explosion imminent? Present evidence suggests that it would be rash to answer either of these questions in the affirmative. What can be said is that without significant advances in yield-increasing technology, the world's food supply systems will eventually be strained to a danger point. What also can be said is that the world's ability to withstand crop failures of the kind that occurred in 1980/81 or demand surges like that of 1973/74 has been badly weakened by the drawdown in food and feed stocks that occurred in the seventies. In the future, smaller and smaller supply reductions will take on larger and larger significance to world food and feed prices.

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FUTURES MARKET STRATEGIES FOR CONSUMER GOODS CORPORATIONS

BY WILLIAM J. JOHNSON

Attitudes of Businessmen

The theoretical side of hedging is more easily understood than the considerably more complex practical side. Methods of hedging can be readily explained in uniform terms to farmers, builders, and bankers. Many businessmen though, feel that the commodity futures merchants oversimplify hedging with broad generalities. Some feel that specific corporate objectives appear to be irrelevancies to commission merchants in their attempt to "educate" the business community concerning futures hedging. Consequently, until recently businessmen have been slow in accepting and using futures hedging.

The recent upsurge in the number of new futures contracts could be very useful to businessmen in many industries. Consider the reliance on fuel oil by manufacturing firms, foreign exchange by multinationals, and interest rates by financial institutions and large corporations. Today there are a growing number of user corporations which are giving serious considerations to futures operations to achieve their objectives. Nonetheless, skepticism and fear remain in the minds of many decision makers. News reports of businesses seriously impaired by aggressive hedge programs that turned into reckless speculation discourage the unexperienced.

Today businesses are engaging in corporate planning more so than ever before. Yet futures operations, potentially one of the most useful tools available to planning, are often bypassed. Effective methods of establishing costs are forced to take a back seat to variable budgeting and elaborate computer programming designed to provide rapid analysis of rapidly changing costs.

Very little research work by the futures merchant industry is devoted to understanding the impact of stabilizing costs in industries where costs have historically run rampant. They feel their job is done simply by showing how to stabilize those costs. Many individuals in the futures industry presume that stable costs are beneficial in all cases. Since this is self-evident in their minds, further research is unnecessary. Management consultants and university professors understand the inherent dangers of delving into this volatile area for their clients and approach the subject with due caution. (There are exceptions: the most notable is the Agribusiness staff at Harvard University.) Some businessmen fear that their careers can be jeopardized by a mistake in judgment about the company's futures operations. Clearly, futures operations are a powerful tool which commands respect; but when futures operations elicit only fear they have been improperly applied or misunderstood by businessmen.

Business executives who ignore futures operations sometimes produce corporate plans that are as theoretical as the theory of hedging. The plans become generalities, possessing tenuous assumptions of such major proportions so as to be rendered useless by the first change in business outlook. As a result, managers of operating divisions develop reactive strategies to deal with the rapidly changing times.

With these general observations as a backdrop, this study deals with those corporate executives who have chosen to develop an aggressive strategy to deal with the changing costs they face. The study is a discussion of business options available to executives involved in futures operations.

The Importance of Corporate Objectives

Of primary importance to any business executive involved in or contemplating futures operations is a clear understanding of the corporate objectives. Well defined objectives allow for the use of futures without fear of unintended and sometimes disastrous results. The starting point for investigating corporate futures operations is the formal corporate planning process. Formulating corporate objectives and determining the desirability of futures operations is an internal matter.

To the corporation's general managers, futures operations can help to meet corporate objectives. These operations deal with price levels of commodities purchased or sold, although commodities can no longer be viewed exclusively as tangibles. For example, consider a bank which "sells" the use of capital to a business. Here interest rates represent the selling price.

Often corporate futures operations are only a single facet of a multifaceted collection of activities designed to meet corporate objectives. For example, an objective to neutralize the influence on gross margins of changing costs of raw materials can be achieved in many ways. Adjustments to the selling price of the product by the Sales Department, raw material inventory stockpiling by the Materials Management Department, or establishing a long futures position by the commodities futures group can all achieve that objective. Moreover, all these actions are interdependent and are directed at achieving a stated corporate objective. Tradeoffs result when the purchase of forward contracts[1] or the buildup of raw material inventories reduce the need for a long position in the futures market. The choice between these simple alternatives can be determined through financial analysis to estimate the most efficient procurement methods.

Somewhat more complex relationships exist when relating the actions of the Sales Department to actions taken in the futures market. Any professional commodity specialist in the futures commission merchant industry can demonstrate how the purchase of futures contracts can essentially lock-in the cost of raw materials for a future point in time. However, gross margins and overall profitability are dictated by the competitive level of sales prices of finished goods and their market share as much as by purchase prices of raw materials. Businessmen responsible for determining prices of products seldom refer to day-to-day fluctuations of commodity costs.

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[1] Forward contracts are agreements to purchase commodities in the physical market for delivery at some specified period in the future. They are different than futures contracts.

Determining a Product's Selling Price

As a practical matter in an industry where costs are constantly changing, it is almost impossible to set selling prices on a "cost plus" basis. Furthermore, consumer goods corporations invest in business building through advertising and other expenses such as research and development not directly related to the cost of raw materials.

Over a period of time, members of a consumer goods industry tend to set selling prices which serve two objectives. First, selling prices tend to reimburse a corporation for its total costs including an adequate economic profit. Total costs include marketing and research and development (R & D) expenses. Second, selling prices tend to be competitive with similar products on the market. When these two objectives are in conflict, management must decide which is the more appropriate. This decision may vary. Some opt for larger profit margins and higher sales prices. Others elect to increase market share through a lower, more competitive price, even though the price does not recover total costs. This strategy may be acceptable even in the long run if competitive prices allow for growth in market share. Then fixed expenses are reduced on a per unit basis of finished products sold.

Futures operations establish the costs of raw material for a longer period of time than competitors who buy primarily in spot markets. This creates dissimilar cost structures among competitors and disrupts those forces which tend to influence similar selling prices. These operations are best implemented when the corporate objective is to operate with a unique cost structure. Therefore, a necessary condition for a corporate futures operation is the willingness to set selling prices of finished goods independent of the competition's price or, alternatively, set selling prices independent of costs.

Industry Pricing Pressures

Can futures operations designed for such purposes be viewed as hedging in the strict sense of the word? If commodity prices rise after a corporation buys futures to establish costs, that corporation maintains an ingredient cost edge over competition. When costs escalate substantially, other manufacturers publish new price lists with higher selling prices. The "hedged" corporation can elect to forego a price increase because its costs did not rise. Those costs have been stabilized through the futures market. Often, the single firm ignores its individual cost advantage and raises prices along with the other members of its industry, thus expanding its gross margins. This is motivated in part by a fear that lower selling prices than those set by a consensus of the industry could result in retaliation by competition. Such retaliation could eventually end in a price war in which the profits of all members are reduced.

Conversely, if commodity prices drop after a corporation locks in costs through futures operations, that corporation finds itself at a competitive disadvantage. Just as benefits are received by a corporation which develops a uniquely lower costs basis, benefits accrue to the competition when the same corporation develops a cost basis higher than the rest of the industry. However, there is a tendency in consumer goods industries today to avoid reductions in selling prices even when costs drop. When industry-wide pricing patterns behave this way, the use of commodity futures operations is especially beneficial. After establishing costs, a corporation generally experiences one of two financial outcomes.

First, commodity prices drop *without* a corresponding reduction in the selling price of the end product. Bakery products, soda, pet foods, candy bars, and other consumer goods products belong to industries which are reluctant to lower retail prices when costs drop. As costs drop, the gross margins of the industry expand. The gross margins of the corporation with fixed costs remain stable at levels originally planned when futures contracts were purchased.

Or, second, commodity prices increase sufficiently to warrant a sales price increase by the industry. When the corporation with fixed costs follows the industry to higher sales prices, it raises its gross margins to new levels, levels unexpected when the plan was set.

Industry-wide pricing tactics are relatively predictable, depending upon the eventual price fluctuations of commodities. This is not to suggest that futures operations always produce, at least, planned profits. Despite the predictable response of consumer goods industries when reacting to changes in costs, exceptions to historical patterns are significant. Furthermore, an attractive gross margin does not guarantee an attractive net income. For example, new product introductions by the competition can negatively affect a corporation's plans for market share and net income. Such factors will be discussed later in this article.

An Individual Firm's Pricing Strategy

The aggressive manager continually reviews the merits of alternative strategies for pricing his product. One strategy is to break ranks with the rest of the industry concerning tacit pricing agreements. The reactive manager should be ready to defend his market share when a competitor assaults his corporation's product lines. The following hypothetical case customizes the data to illustrate specific points. It is acknowledged here that the influence of costs on operations is emphasized over other equally important influences. Many factors held constant in the following case study are in reality variables. Later in this study, public disclosures by members of the candy industry will illustrate the complexity of marketing strategy variables.

Table 1 represents a financial overview of a ficticious industry in the consumer goods field which sells through supermarkets. The major raw ingredient of this industry is corn, which is listed on the income statement as "traded commodities." Financial data on a particular corporation, XYZ Corporation, within this industry is found to the right of the entire industry's data.

In January of 1981 the managers of XYZ Corporation felt that although corn prices were relatively high due to a drought the previous year, its price could increase greatly if another crop problem occurred in 1981. After careful deliberations they concluded that "locking-in" corn prices for delivery through 1981 was consistent with their corporate objectives. The average price of corn for 1981 was estimated to be $3.90 per bushel. This was based on estimated expenses of inbound transportation, basis

TABLE 1
Income Statements Year Ending 12/31/80 (in millions of dollars)

	INCOME 1980					
	XYZ's INDUSTRY			XYZ CORP.		
			%			%
Sales		$1000	100		$60.0	100
Cost of Goods Sold						
Ingredients						
Traded Commodities	250		25	15.0		25
Packaging & Other	150		15	9.0		15
Manufacturing						
Labor & Other	150		15	9.0		15
Depreciation	50		5	3.0		5
Total Costs		600	60		36.0	60
GROSS MARGINS		$400	40		$24.0	40
Other Costs						
Distribution		100	10.0		6.0	10.0
Selling & Administration		45	4.5		2.7	4.5
Advertising		65	6.5		3.9	6.5
Promotions		40	4.0		2.4	4.0
Other Fixed Overhead		50	5.0		3.0	5.0
Total Other Costs		$300	30.0		$18.0	30.0
NET INCOME		$100	10.0		$6.0	10.0
Sales & Cost Data						
Market Share (%)		100			6	
Wholesale Price (per unit)		$1.65			$1.65	
Corn Price (per bu.)		$3.80			$3.80	
Corn Consumed (000,000 bu.)		73.5			4.4	

premiums/discounts, and carrying charges as well as futures market prices. This price level was reflected in the budgets submitted the previous year for the 1981 fiscal year. This allowed for a 40% gross profit margin, one typically found in the industry.

XYZ Corporation decided to purchase 4.4 million bushels of corn futures at then-current prices averaging $3.90 per bushel in order to protect that gross margin by essentially locking-in that expense. This decision was based on some rather subtle inferences concerning the potential outcome.

Consumer Resistance to Higher Prices

If corn prices went up dramatically, wholesale selling prices of the industry's finished goods would follow. Other members who purchase corn on the *spot* market would be at the same competitive disadvantage. When one corporation would announce a price increase to maintain a 40% gross margin, the others would quickly follow. In this case, XYZ Corporation would enjoy an expanded profit margin by locking-in corn prices at lower levels and by following competition in increasing wholesale prices of finished goods.

This scenario did not take into account any consumer and retailer resistance to price increases. During 1980, the drought caused corn prices to increase almost $1 per bushel. In that year, our theoretical industry announced three price increases in its end products to cover the increased cost of corn. The last increase of 8% in November of 1980 met with great consumer resistance. Substitute food products which did not contain as much corn became more attractive in terms of prices to the consumer. While members of the industry maintained their relative market share, sales for the entire industry dropped 2% over the following 2 months. Although gross margins were preserved, the drop in consumer consumption caused a drop in net income for every manufacturer in this industry.

Manufacturers' Reluctance to Drop Prices

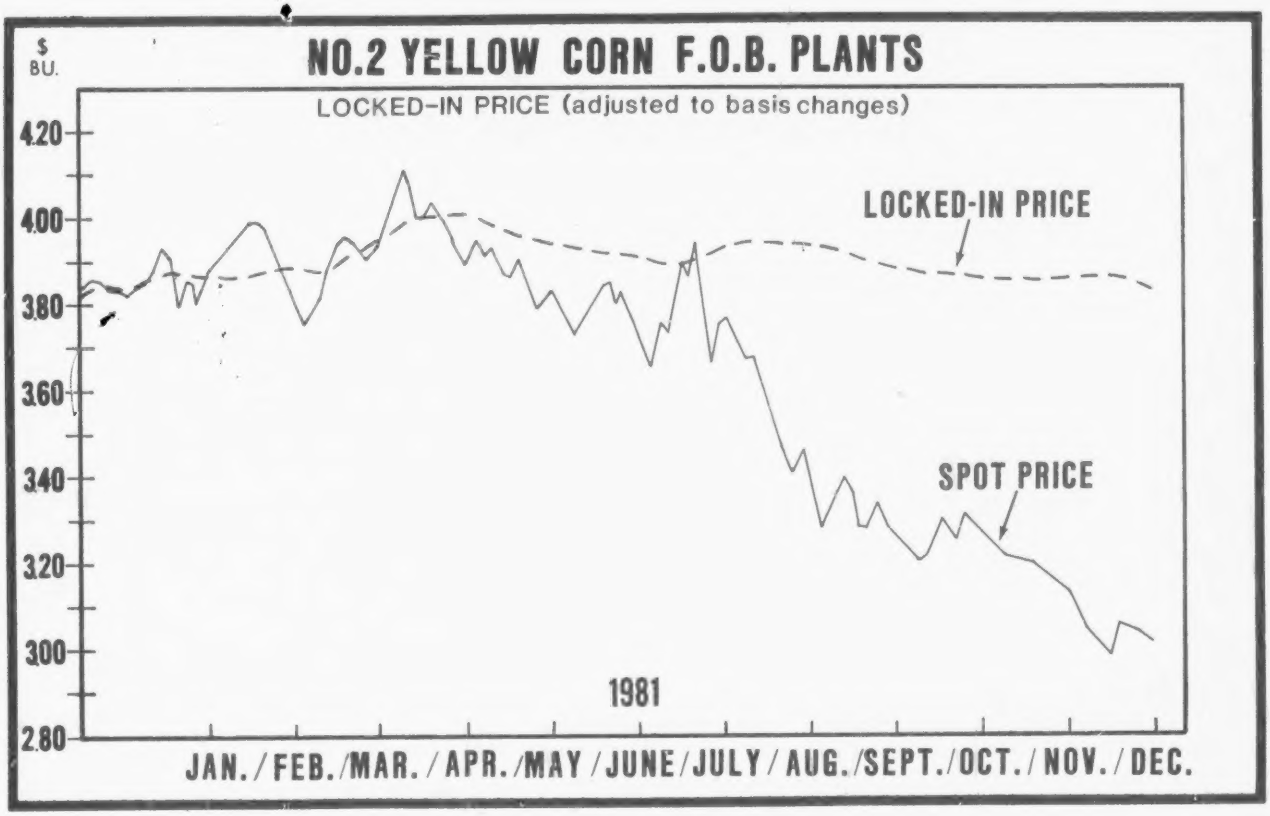
However, if after the purchase of corn futures by XYZ Corporation corn prices fell dramatically, the risks of having a non-competitive cost position would not be great. Having struggled to establish the last price increase, the industry would not be quick to reduce prices. The increases in costs in 1980 created some financial problems for all the manufacturers. Lower costs in 1981 would mean higher revenues which would be used to repair some damages from the previous year. Some of this extra revenue would be used to regain consumer loyalty through advertising and promotions. Other revenue would be earmarked for R & D, a function which some manufacturers reduced the previous year because of the drought-caused and other cost increases. Most of the revenues would be used to increase net income. The most crucial decision made by the managers of XYZ Corporation was that the members of the industry would not fight for a bigger share of the market by lowering prices.

Commodity Price Movement

XYZ Corporation decided to buy corn futures in January of 1981. It paid an average price of $3.90

per bushel for an amount of futures equal to its expected cash corn needs. Chart 1 represents the corn price movement during the year. The solid line plots spot corn prices in the areas of XYZ's manufacturing plants, reflecting the price which would have been paid without the offsetting futures hedge. The dotted line represents their actual corn purchase prices considering the losses from futures.

The reader will note that the "locked-in price" is not perfectly horizontal. The phrase "locked-in price" is a misnomer of sorts. It expresses the condition of prices in relative terms, relative to spot prices. In most cases it does not mean that prices are fixed at a single level for the entire year. In this particular case, the locked-in prices are a combination of higher expenses due to carrying charges and interest lost on funds used to meet margin calls offset by a sizable drop in the "basis." The basis is the premium or discount for cash corn relative to the futures contracts. As the 1981–82 crop matured, the spot price of the old crop corn fell faster than the futures price. This was caused by farmers in the vicinity of XYZ's plant selling their inventory to raise capital and also to make room in their bins for the bumper new crop harvest.



As one examines the 1981 bear market for corn in Chart 1, he may be tempted to make the assumption that the price drop was easily predictable. With that assumption in mind, the obvious course of action is to "lift the hedge." In other words, sell the futures contracts and enjoy the lower spot price. Unfortunately, it is not that easy. The assumption that a commodity price move is easily predictable is flawed. If one could predict with a high level of certainty that corn prices were going lower, the futures markets would already reflect those lower prices. Managers who are considering futures operations must accept the potential risk of losing money in the futures markets from time to time. It is inevitable.

Hedging Results

Table 2 represents the specific results in XYZ's futures account during 1981. The total losses from futures operations amounted to over one million dollars. Notice that the losses during the first 5 months were minor, but the futures account lost large sums of money during the last 5 months of the year. The latter period was after the forecasts for corn production indicated a bumper crop. By the end of June, XYZ Corporation had sold one half of its futures position that it had acquired at $3.90 per bushel in

January. Each month it purchased its required volume of spot corn and liquidated a comparable volume of futures contracts as an offset.

During 1981 the selling price of finished products in this industry remained stable, with only a single price increase of 4% in July to cover increases in labor and packaging expenses. Considering the drop in corn prices, a minor increase in retail prices came as no surprise to the managers of XYZ Corporation. Although the price of corn had dropped a total of $.81 per bushel from January to December, the average price drop (weighted according to cash corn purchases per month) was only $.24 per bushel. Table 3 outlines the financial results of the entire industry and XYZ Corporation for 1981. Other manufacturers in the industry who purchased corn on a spot basis enjoyed an expanded gross profit margin or as some describe it, they participated in a windfall increase in net income. XYZ Corporation, on the other hand, produced a financial outcome in keeping with their expectation at the beginning of the year.

The financial results for the industry and XYZ Corporation were predictable at the beginning of the year, assuming that corn prices behaved as they did. In fact XYZ's performance was predictable at the point futures were purchased regardless of the eventual price behavior of corn. The industry benefited from expanded gross margins. XYZ Corporation chose to forego those benefits in return for protection against a potential reduction in gross margin in the event of a consecutive drought-reduced corn crop. One can only guess what the results would have been if the corn crop had been damaged by drought in 1981.

TABLE 2
Corn Costs for 1981 XYZ Corporation

Month	Corn Quantity Manufactured	Spot Price $/Bushel	Futures Profit (Loss)	Actual Cost (Inc. Futures) $/Bushel
January	375,000 bu.	$3.88	—0—	$3.88
February	380,000 bu.	3.87	($11,400)	3.90
March	380,000 bu.	3.90	—0—	3.90
April	360,000 bu.	4.02	21,600	3.96
May	360,000 bu.	4.04	7,200	4.02
June	360,000 bu.	3.88	(28,800)	3.96
July	350,000 bu.	3.85	(24,500)	3.92
August	350,000 bu.	3.70	(80,500)	3.93
September	360,000 bu.	3.40	(183,600)	3.91
October	375,000 bu.	3.32	(221,250)	3.91
November	375,000 bu.	3.18	(262,500)	3.88
December	375,000 bu.	3.07	(307,500)	3.89
Totals	4,400,000 bu.		($1,091,250)	
Average Price per Bushel		$3.68		$3.92

TABLE 3
Income Statements Year Ending 12/31/81 (in millions of dollars)

	INCOME 1981					
		XYZ's INDUSTRY	%		XYZ CORP.	%
Sales		$1092	100		$65.9	100
Cost of Goods Sold						
Ingredients						
Traded Commodities	271		25	17.2		26
Packaging & Other	158		14	9.4		14
Manufacturing						
Labor & Other	162		15	9.8		15
Depreciation	50		5	3.0		5
Total Costs		641	59		39.4	60
GROSS MARGINS		$451	41		$26.5	40
Other Costs						
Distribution		111	10.2		6.7	10.2
Selling & Administration		49	4.5		3.0	4.6
Advertising		68	6.2		4.1	6.2
Promotions		43	3.9		2.7	4.1
Other Fixed Overhead		50	4.6		3.0	4.6
Total Other Costs		$321	29.1*		$19.5	29.6*
NET INCOME		$130	11.9		$ 7.0	10.6
Sales & Cost Data						
Market Share (%)		100			6	
Wholesale Price (per unit)		$1.68			$1.68	
Corn Price (per bushel)		$3.69			$3.92	
Corn Consumed (000,000 bu.)		73.5			4.4	

* Does not equal due to rounding.

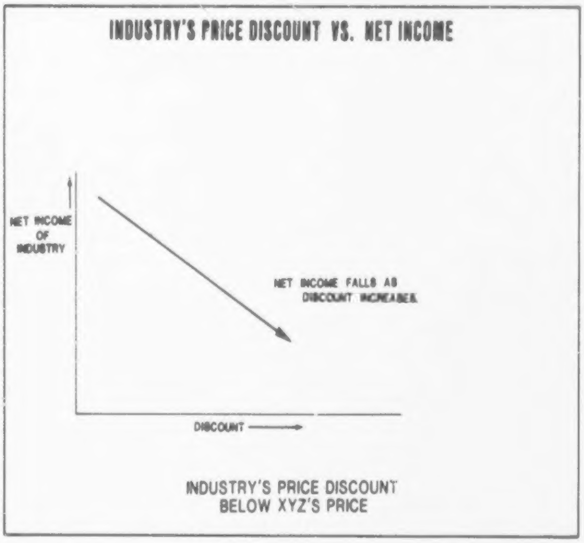
Price vs. Market Share Considerations: Industry

Before expanding on that possibility, a close look at the industry-wide benefits reveals an interesting relationship. All of the industry except XYZ Corporation enjoyed expanded gross profit margins due to falling corn prices. That represents 94% of the entire industry sales. The odds that lowering sales prices would lead to increasing market share for any one company are very low. One member of the industry may pass lower costs to the consumer in the form of lower prices. All competitors except XYZ Corporation will be able to do the same since they also benefited from lower corn costs. Perhaps XYZ Corporation with its higher costs would not follow the industry in reducing selling prices. Thus the industry would effectively squeeze market share away from XYZ Corporation by making them less competitive in the market place.

Since XYZ Corporation has only a 6% market share, its non-competitive position could have caused it to lose, for example, one half of its market to the competition. It would represent only $33 million of increased sales to be divided among the many other members of the industry. Since this is a billion dollar plus industry, the net increase of this transfer represents a mere 3% increase in market share to the corporations who sell 94% of all sales. Thus, the incentive to lower prices on all finished goods to achieve that degree of incremental gain does not exist. The cost of price warfare far outweighs the benefits.

Chart 2 is a chart showing the relationship between net income of the industry (exclusive of XYZ Corporation) and retail sales prices. It assumes that a reduction in sales prices causes a reduction of XYZ's sales and a comparable increase in sales for the rest of the industry. For example, if XYZ's retail price on the grocery store shelf is $1.99 per package, and the rest of the competition sold a comparable product for $1.79, then XYZ's total sales would drop significantly.

As discounting becomes widespread, revenues from sales fall far greater than the savings from corn price reductions. Furthermore, assuming there exists a loyal segment of consumers who prefer XYZ's products, there would not likely be a large drop in XYZ's market share. On the contrary, some consumers may infer that the higher retail price means that XYZ sells a better product. In those cases, consumers may swing away from the competition to XYZ's products.



Differences of Commodity Producers and Users

Herein lies a major difference between the conventional wisdom of hedging operations of producers and first line users of homogeneous commodities and those of futures operations of consumer goods corporations. When a grain elevator or farm producer wants to sell large quantities of corn, it does so by lowering sales prices marginally below the competitors. It does not take a large price discount to greatly increase demand. Hedging becomes very important under these conditions. Each farmer or elevator operator must stay competitive with others in his business. The absolute price of a commodity is secondary to the ability to compete at that price. Futures hedging keeps a holder of commodity inventories "on the market."

The consumer goods corporation transforms homogeneous commodities into a unique item with its own brand name and imagery. In addition to the various manufacturing steps which add value to the raw materials, the products are supported by specifically targeted advertising and promotion programs designed to build brand loyalty. Consequently these products become less sensitive to changes in selling prices. Hence a drop in the selling price may not affect demand to the same extent as it does for the grain elevator operator. Here futures operations put more emphasis on the absolute price of commodities. Executives of consumer goods corporations are more inclined to buy low price commodity futures and not buy relatively high price futures. These operations are seldom used to offset physical inventories or match up purchases with known sales contracts.

Price vs. Market Share Considerations: Individual Firm

The relationship between price discounts and net income differs dramatically when analyzing the individual firm rather than the entire industry. It has been illustrated that no incentive exists for the industry to take advantage of XYZ Corporation because of XYZ's higher cost basis for corn. Transferring some of XYZ's market share to the rest of the industry at the cost of a price reduction did not make economic sense. A total possible market share of 6% is not a large enough target because not all of the 6% would be transferred to the rest of the industry. Whatever part was transferred would be spread among all the members of that industry. Hence, the market share gained by any single member would not be great.

The opposite is not true. If corn prices had gone up in 1981, XYZ Corporation would have had an opportunity to gain share from the 94% held by competitors. If it chooses to depart from industry-wide pricing practices its potential gain is great. To illustrate this, let us first consider the relative positions of the industry and XYZ Corporation if corn prices went up in 1981 and the industry announced a price increase which XYZ followed. Table 4 is the estimated income statements assuming corn prices went up $1 per bushel in 1981.

TABLE 4
Estimated Income Statements Year Ending 12/31/81 (in millions of dollars)

	INCOME (est.) 1981					
	XYZ's INDUSTRY		%	XYZ CORP.		%
Sales		$1131	100		$68.5	100
Cost of Goods Sold						
Ingredients						
Traded Commodities	323		28.6	17.2		25.1
Packaging & Other	158		14.0	9.4		13.7
Manufacturing						
Labor & Other	162		14.3	9.8		14.3
Depreciation	50		4.4	3.0		4.4
Total Costs		693	61.3		39.4	57.5
GROSS MARGINS		$438	38.7		$29.1	42.5
Other Costs						
Distribution		111	9.8		6.7	9.8
Selling & Administration		51	4.5		3.1	4.5
Advertising		68	6.0		4.1	6.0
Promotions		43	3.8		2.7	3.9
Other Fixed Overhead		50	4.4		3.0	4.4
Total Other Costs		$323	28.5		$19.6	28.6
NET INCOME		$115	10.2		$ 9.5	13.9
Sales & Cost Data						
Market Share (%)		100			6	
Wholesale Price (per unit)		$1.74			$1.74	
Corn Price (per bushel)		$4.38			$3.92	
Corn Consumed (000,000 bu.)		73.5			4.4	

The industry could theoretically retain a 10% net income on sales through a finished goods price increase. However, as mentioned earlier, the industry is sensitive to consumer resistance to price increases. In other words, it is vulnerable to a loss of industry sales. It can also be assumed that it is vulnerable to redistribution of market share if a member of the industry does not raise prices when others do.

The greatest benefit of futures operations to consumer goods corporations is demonstrated in this case. Instead of following others in raising prices, XYZ is in a unique position to lower its price back to the November 1980 level. Thus it becomes more competitive on the grocery store shelf. A potential increase in market share produces a temporarily highly leveraged increase in net income.

Table 5 is an approximation of income statements based on the following assumptions. First, the industry sales prices is increased in 1981 to offset increased corn prices. Second, XYZ Corporation does not raise prices in 1981 since futures operations locked-in corn prices at the beginning of the year. Third, there is a transfer of 1% of the market share to XYZ Corporation from the rest of the industry.

Compare the financial performance of XYZ Corporation in Tables 4 and 5. Lowering the price to 1980 levels allowed for an increase in market share and total sales. The reduction in sales price and the ensuing increases in sales resulted in an overall increase in manufacturing efficiency. In addition fixed expenses dropped on a "per unit sold" basis. The net result was a $100,000 increase in net income. A close relationship exists between discounting and net income for the single firm within the industry.

The Role of Futures Operations

Futures operations are a crucial element to the validity of this conclusion. Table 5 is calculated on the basis of XYZ's corn prices being fixed at $3.92 per bushel while the rest of the industry averaged $4.42 per bushel. Aggressive managers who attempt to unilaterally reduce a selling price must be confident that the competition would not follow their lead. In this case, the managers concluded that the competition would not reduce prices in the face of rising corn costs. As illustrated in the following graph (Chart 3) the net income increases when price discounting begins to take place for the individual firm. Net income then drops for larger discounts. The highest net income (point A) exists where the optimum trade-off is found between higher market share and lower sales price. After this point reductions of income by virtue of lower prices cannot be offset by increases of income resulting from efficiencies normally experienced when market share rises.

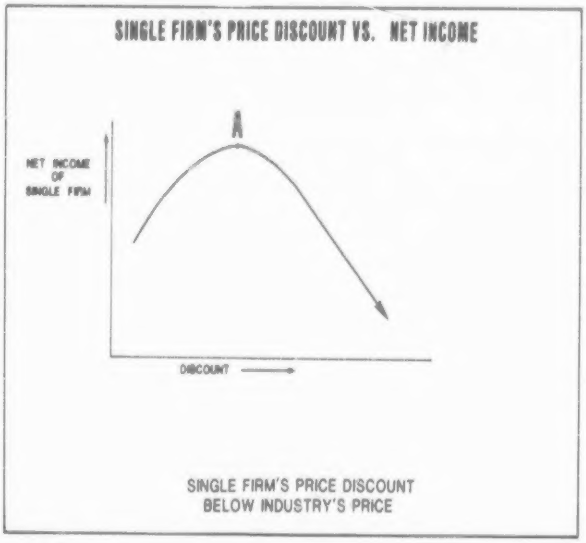
TABLE 5
Estimated Income Statements Year Ending 12/31/81 (in millions of dollars)

	INCOME (est.) 1981					
	XYZ's INDUSTRY			XYZ CORP.		
			%			%
Sales		$1125	100		$75.0	100
Cost of Goods Sold						
Ingredients						
Traded Commodities	322		28.6	20.0		26.7
Packaging & Other	158		14.0	11.0		14.7
Manufacturing						
Labor & Other	161		14.3	10.4		13.9
Depreciation	50		4.4	3.0		4.0
Total Costs		691	61.4		44.4	59.2
GROSS MARGINS		$434	38.6		$30.6	40.8
Other Costs						
Distribution		111	9.9		7.8	10.4
Selling & Administration		51	4.5		3.4	4.5
Advertising		68	6.0		4.1	5.5
Promotions		43	3.8		2.7	3.6
Other Fixed Overhead		50	4.4		3.0	4.0
Total Other Costs		$323	28.6		$21.0	28.0
NET INCOME		$111	9.9*		$ 9.6	12.8

Sales & Cost Data		
Market Share (%)	100	7
Wholesale Price (per unit)	$1.73 per unit	$1.65 per unit
Corn Price (per bushel)	$4.38 per bu.	$3.92 per bu.
Corn Consumed (000,000 bu.)	73.5	5.1[1]

* Does not equal due to rounding.

[1] A greater long position in corn is needed since the market share increased. If the increase in market share could not be anticipated and hedged in the futures market, the cost of corn would be higher and income lower.



SINGLE FIRM'S PRICE DISCOUNT VS. NET INCOME

As a practical matter, the ability of a corporation to place itself in a competitive position through the purchase of futures contracts must be regarded as temporary. The purchase of futures equivalent to one year's requirements can produce a distinctive advantage. This assumes that commodity prices move up significantly during that year. After that period of time, the individual corporation will revert to paying spot prices just as the balance of industry pays spot prices for its raw materials. Whatever advantages the individual firm can gain must be accomplished in a short period of time. In addition, if competition knows that the advantage is a short term one, they may be more inclined to institute counter-measures.

Marketing Strategies

Although the cost advantage of an individual corporation will expire when price protection from futures abates, the benefits of increased market share may continue for a considerably longer period. Higher market share brings with it increases in efficiency throughout the corporation. Currently, there exists an on-going battle in the candy industry which illustrates many of the points made in this article. Essentially, it is the story of M&M/Mars taking to the offense with their marketing strategy for increasing market share, and of subsequent defensive action taken by Hershey Foods Corporation.

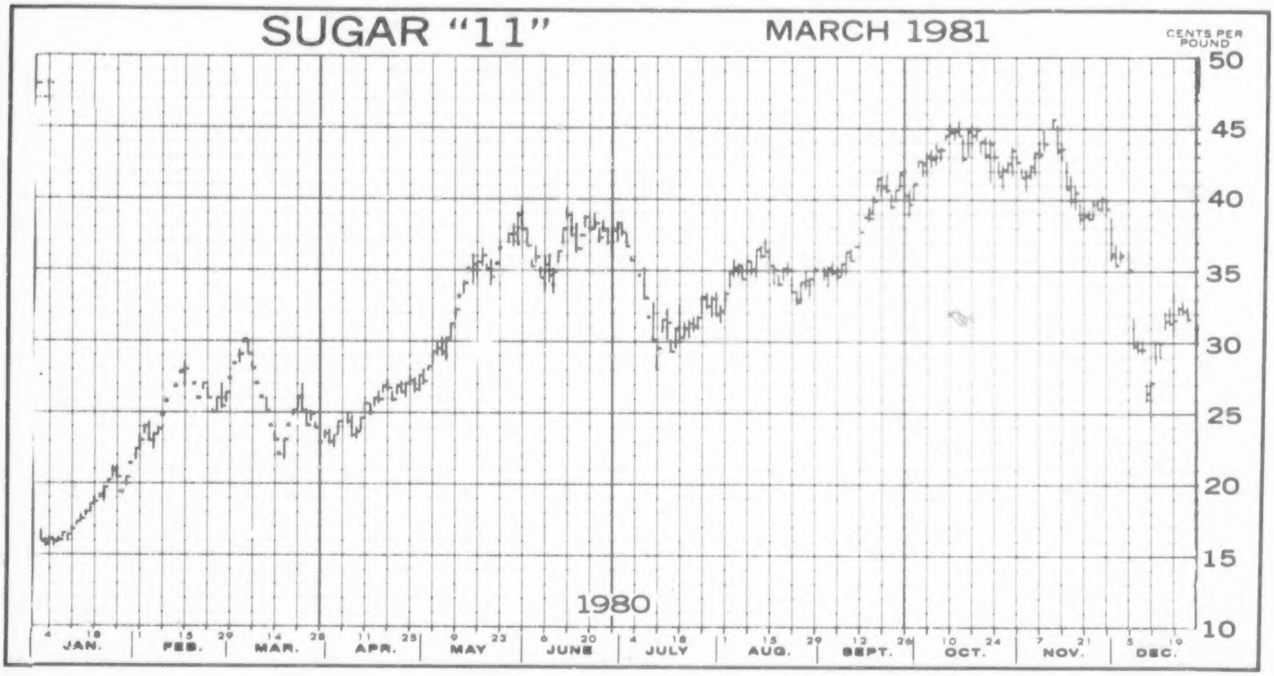
The aggressive marketing campaign by M&M/Mars began in November 1980, but it appears to be unique only in its publicity. For a great part of its history, Hershey was the industry leader in chocolate candy. However, it was not until 1969 that it began any serious advertising of its product lines. It was at that point that the managers of Hershey realized that the aggressive advertising campaign of M&M/Mars was causing a shift of market share from Hershey to Mars.

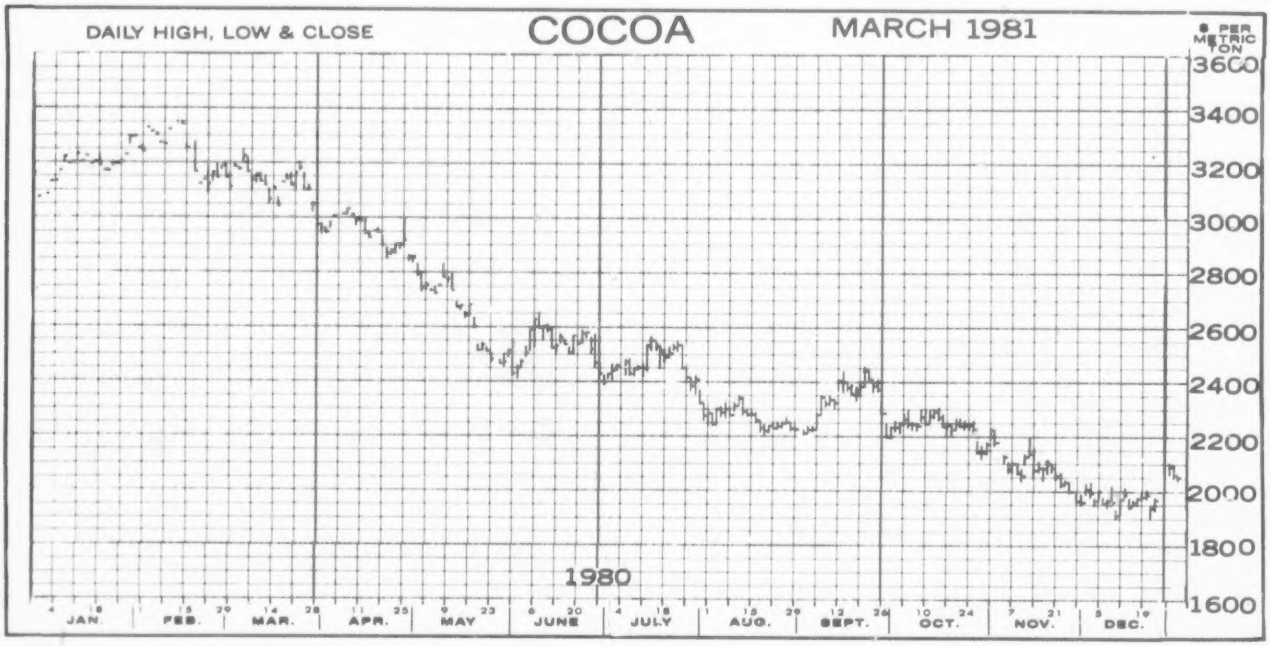
Although Hershey's consumer advertising budget has increased dramatically since then, Mars gained sufficient momentum from being the first in aggressive advertising to take over the number one spot in the chocolate candy industry.

Hershey, in an effort to regain the number one spot in 1979, increased the marketing budget substantially over 1978.

In response, Mars again took the offensive in November of 1980 with a widely publicized announcement. It announced an increase in the weight of its major singles candy bars and packs an average of 10% without a corresponding price increase. In effect, the announcement represented a price drop per unit of candy consumed. The announcement was heavily supported by TV and newspaper advertising to consumers and the trade. In addition, a weight change caused sizable expenses in packaging costs in that the size of each candy wrapper was increased.

The company's costs of commodities provided some help. Charts 4 and 5 indicate the 1980 prices of the two major commodities used by the candy industry, sugar and cocoa.





Although cocoa prices had been falling during much of 1980, sugar prices had been increasing. When Mars announced the weight increase, Hershey suggested that it was a marketing ploy without cost justification. A spokesperson for Hershey pointed out to this author that Hershey's emphasis was in the solid bar category which relied more heavily on cocoa prices while Mars emphasized coated bars where sugar prices had a relatively greater effect.

Results of futures operations for either of these corporations are highly secret. No inferences cited in this article should suggest that the author has knowledge of any internal futures operations at either corporation. However, an inconsistency exists and one possible explanation might relate to futures operations. If Hershey, whose cocoa prices dropped, could not justify what was tantamount to a price reduction by Mars whose sugar prices increased, how could Mars justify it? Was it just a marketing ploy? Not likely since the cost of such a change would be millions of dollars in higher marketing, packaging and raw material expenses.

Perhaps one must look back on the price chart for sugar 6 months or more prior to the weight increase to determine the price Mars paid for sugar. The move toward a larger candy bar by Mars at the same price, makes sense if one assumes that sugar prices were locked-in at some lower price prior to November, 1980. Such a major change in marketing strategy requires great lead times to deplete inventories of smaller candy wrappers, design and purchase new wrappers, design and schedule new TV advertisements and retool plant equipment. It is more logical to believe that all these steps were taken in view of the competitive advantage that was developing while sugar prices were rising. If Mars was not "long" in the sugar futures markets or received price protection by some other means during this period, no such competitive advantage would exist. On the contrary, cocoa prices were falling and it was likely that if any advantage existed at all, it would be for Hershey, not Mars.

Results of Aggressive Strategies

The aggressive move by Mars caught competitors by surprise. Even if Hershey decided to follow the Mars move, the lead time required prevented them from doing so without lengthy preparations.

On May 6, 1981 *Reuter*'s news wire carried the following story.

> M and M/Mars Says Sales Jumped
>
> New York, May 6—Privately-held Mars Inc's M and M/Mars subsidiary said its sales have increased more than 50% since it increased candy bar weights an average of 10% without raising prices in November.
>
> The company said "since the demand has led to improved efficiency in operations, we will continue to hold our prices on singles and multi-packs for the foreseeable future."
>
> M and M/Mars and Hershey Foods Corp are in close competition for the market share lead in candy bars.

The following excerpt from a story published in the Sunday Star-Ledger on May 19, 1981 in Newark, N.J. makes reference to Mar's increase in productivity resulting from larger market share.

> M&M/Mars is the nation's leading candy supplier, having ousted Hershey Foods Corp. from that perch about a decade ago. Three of the company's products, Snickers, M&M Peanut and M&M Plain, were the top three candies in the nation in 1980, according to the DEBS Report, a major industry survey which charts sales through the nation's tobacco and candy distributors.
>
> Throughout the past decade candy bars have gotten smaller and their prices have edged higher. M&M/Mars moved to arrest this trend six months ago, by increasing the weight of its candy bars by 10% and leaving the prices alone.
>
> "Sales so far this year are 50% ahead of what they were one year ago," reported Alum Jones, senior vice president of marketing for M&M/Mars. "We took less profit on each bar we sold in the hope that we would sell more—and we sold a whole lot more."
>
> M&M/Mars is a privately held company and does not reveal its sales and earnings. Jones said the Company was able to increase production significantly, without having to invest in much new equipment and labor, thus lowering its unit costs and increasing productivity.
>
> "Our workers really put out to achieve this," Jones said. "We had additional capacity, but we never knew we had as much as we did."
>
> Jones contended M&M/Mars expanded the total confectionery market by upping its candy bar weights: "We got people to realize what good value candy bars were in days of inflation.

Table 6 is a list of the top ten chocolate bars which was published in the same newspaper-article.

TABLE 6
The Top Ten Chocolate Bars in the U.S. 1980

Candy	Maker
1. Snickers	M&M/Mars
2. M&M Peanut	M&M/Mars
3. M&M Plain	M&M/Mars
4. Reese Cup	Hershey
5. Hershey Almond	Hershey
6. Hershey Milk	Hershey
7. 3 Musketeers	M&M/Mars
8. Baby Ruth	Stand. Brds.
9. Kit Kat	Hershey
10. Whatchamacallit	Hershey

Source: DEBS Confectionery Marketing Report.

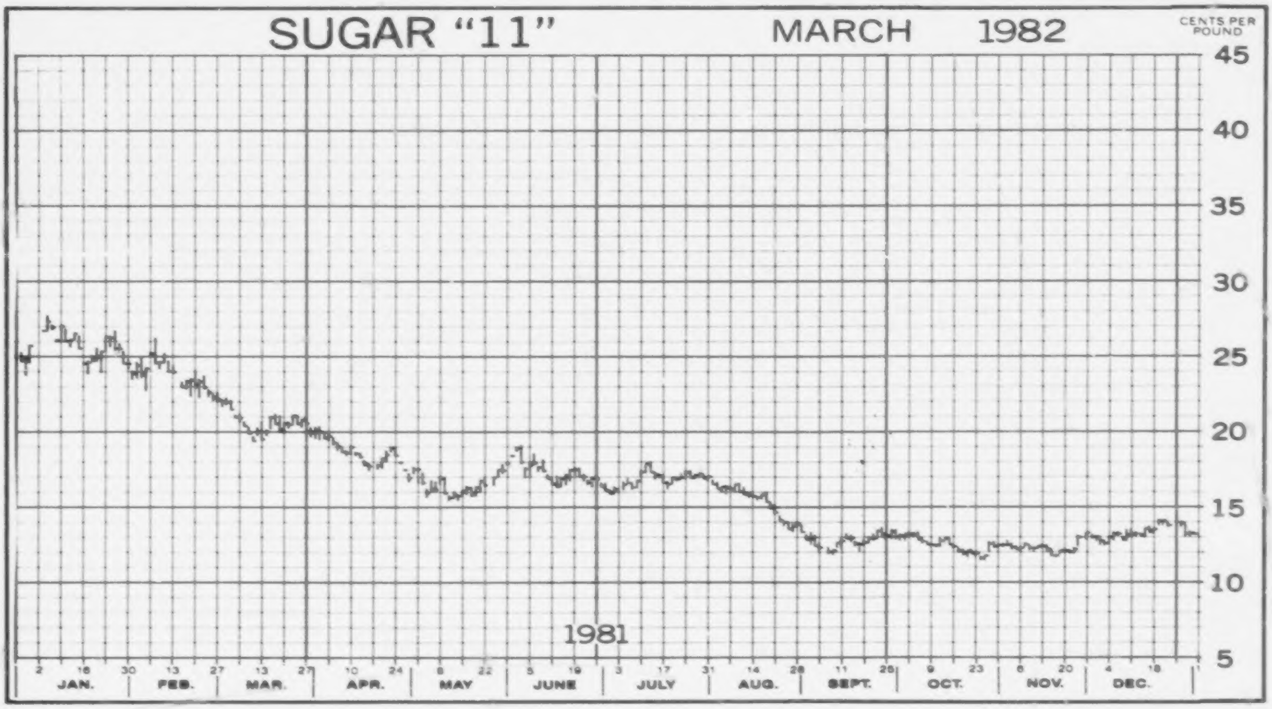
Residual Benefits

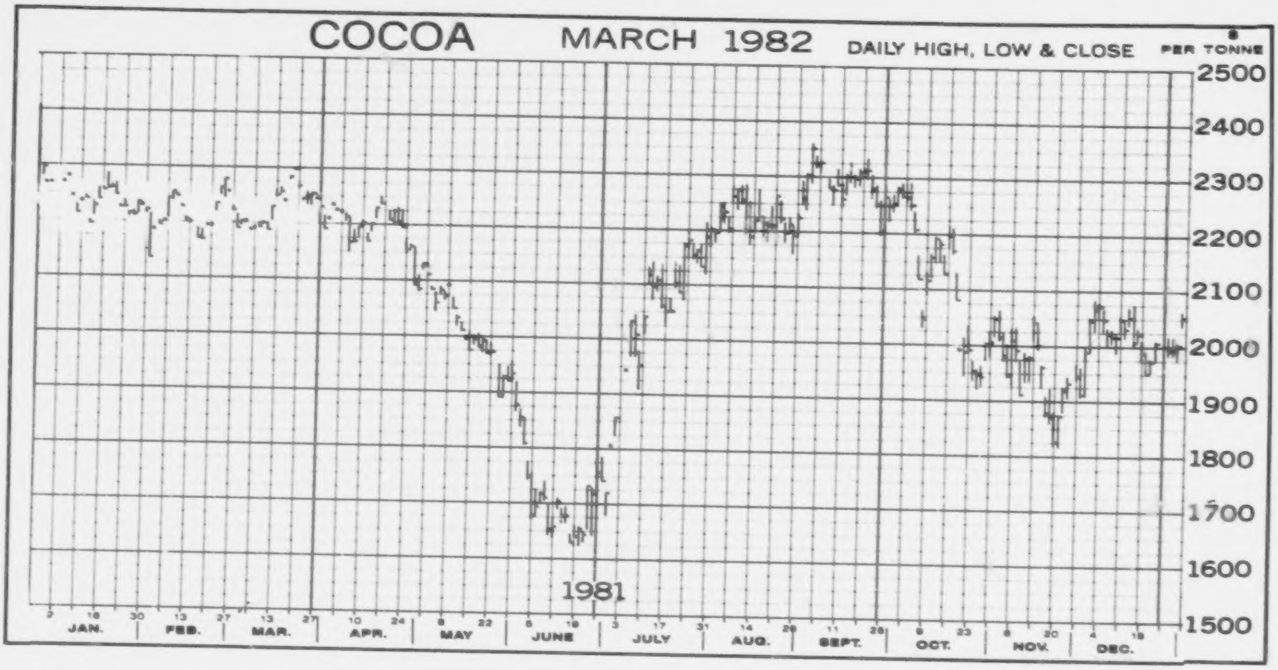
So positive were the results for Mars and so secure was their number one position in the candy industry that they surprised the industry for the second consecutive year. In September 1981 they announced with considerably less publicity that they raised the suggested retail price of their candy bars from 25¢ to 30¢. Their wholesale price increase could convert to as much as $200 million of additional revenues in 1982.

An excerpt from a report on this move found in the November 9, 1981 *Forbes Magazine* deals in part with the industry's reaction.

> Last November the company benevolently raised its candy bar weight by roughly 10% without a jump in prices. What's more, sugar and cocoa prices—about half of raw material costs—are more stable than they have been in months. To competitors, last November's treat now looks like a well-conceived Mars trick.
>
> A toothsome advertising blitz accompanied Mars' 1980 weight increase. Hershey, the nation's second-ranked manufacturer with candy revenues of $930 million, kept its bars and popular Reese's Cups at the same weight. Result: Mars increased its market share from an already leading 37% to a whopping 46%. At Hershey, market share fell from 28% to 26% despite the introduction of several new products, but sales actually increased because Mars' ad spending helped total volume grow. Smaller candymen—such as Curtiss, Peter Paul Cadbury and D. L. Clark—suffered even more, since most of the market expansion went to Mars and Hershey. Says Peter Paul Cadbury President Lloyd Elston: "The Mars move last November hurt just about everybody."
>
> Now, with Mars keeping 3.4 cents of its 5-cent suggested retail price hike, the industry is again "down at the mouth." Though retailers and manufacturers have attacked the Mars move, its effect may force competitors to raise their prices too. With Mars producing so many top sellers, candy vendors have little choice but to grudgingly follow its pricing suggestions—even though big chains like K mart and Lucky Stores have vowed to stop selling 30-cent bars. Competitors' big worry is that retailers will raise the price of all candies, taking the entire extra nickel themselves on everything except Mars products.
>
> If all bars sell at 30 cents, there's still a decided weight advantage for Mars. But if Hershey and smaller competitors convince retailers to establish a two-tier system, they could enjoy a strong marketing advantage.
>
> Mars is notoriously secretive, and no one knows its real strategy. Last year's weight increase came during a Hershey work stoppage and boosted Mars' sales dramatically. "There's speculation that Mars intended to raise prices then," says Gerald Prescott of the DEBS *Confectionery Marketing Data Report*. "But knowing that Hershey couldn't follow suit, they went after market share instead." Others point out that the gains Mars enjoyed from the weight increase were tapering off and that by making the inevitable move to 30 cents first, Mars will profit sooner. Also, with its massive market share it will surely profit most.

On the surface, the price hike by Mars in September, 1981 gives some credibility to Hershey's assertion that the weight increase in November 1980 was just a marketing ploy. The following illustrations show the price moves of sugar and cocoa during 1981 (Charts 6 and 7). Over-all these commodity prices dropped from the levels of November, 1980.





With lower price levels for these raw materials, why does Mars feel it necessary to raise prices? Again a possible explanation might lie in the likely actions taken in the futures markets. The November 1980 Mars strategy was to hold prices for their larger candy bars. It is a reasonable assumption that they bought futures either then or prior to November to protect their public statements concerning retail prices of their products. Otherwise, it would have been extremely embarrassing to Mars had a bull market in cocoa and sugar caused them to raise prices soon after November of 1980. The possibility of a substantial long position in futures prevented them from enjoying raw material price drops during 1981. This is consistent with Hershey's reaction to the Mars price increase in September.

"Certainly we would be experiencing similar cost increases and we don't feel costs justify a price increase," said a Hershey spokeswoman as quoted in *The Wall Street Journal*.

Whether or not the Mars price increase was justified is probably a question with no easy answer. Whether or not Mars was long cocoa and sugar futures during the price slide in 1981 is a matter of speculation by this author. But one observation is surfacing from this chain of events. Even if Mars was long futures and lost money in their futures account in 1981, their corporate objectives were met and possibly exceeded by a wide margin.

The 30¢ Mars candy bar is probably here to stay. Despite Hershey's public claim to the contrary (Illustration 1), there will be tremendous pressure on Hershey to raise prices to 30¢ on a retail basis. Many retailers will not accept a two tier pricing structure and will simply raise the price of Hershey bars to 30¢. Thus Hershey will not benefit that much from a lower wholesale price. In time, Hershey will meet Mars' price and probably also meet their candy bar weight. In doing so they will simply be reacting to an aggressive strategy of a competitor. The author suspects that Hershey (in 1981) held an advantage over Mars in its commodity prices, i.e., lower cocoa and sugar costs. Yet Hershey was on the defense. Its next set of actions represent attempts to recoup the ground lost to Mars. For some of the other members of the industry, the lost ground is close to irretrievable.

Illustration 1. (Adv. of Sept. 28, 1981)

NO NEWS IS GOOD NEWS

Hershey is holding the line on candy bar prices.

An increase in the wholesale price of some candy bars was recently announced.

We want you to know that Hershey is not raising the price of any of its candy bars. Why? Because our business conditions do not necessitate a price increase.

Hershey has always maintained a policy of offering quality products at the best possible consumer value. And that shouldn't be news to anyone.

HERSHEY'S

The aggressive strategy of M&M/Mars serves as an example of an industry leader in tight control of their corporate strategies since November of 1980. Rather than reacting to competition they were the leading edge of the industry. An unexpected bull market in commodity prices could have been extremely disruptive to their strategies. Therefore, it would come as no surprise to find that Mars was an aggressive buyer of cocoa and sugar futures contracts in order to meet its corporate objectives.

Ironically, commodity prices had a negative trend over the period under review. If anything, Mars probably lost money in the futures markets. At the same time, it is likely that their net income increased substantially. Is this "hedging" for a consumer goods corporation? By whatever name, the corporate use of futures which assists in producing these kinds of results is to be encouraged.

Conclusions

Those in the consumer goods industries who fear or ignore commodity futures markets as well as other innovative business methods may find that their principal corporate strategy deals with "recouping lost ground." The two examples discussed in this article suggest that "profits" are not found in the commodity account but rather in the income statement. Often an executive of a consumer goods corporation buys a relatively small position in the futures markets and hopes he is wrong. The more money he loses in futures, the higher the corporate net income.

On other occasions, the ability to fix prices on raw material costs is sufficient in itself to increase net income. Some members of industries are extremely competitive, particularly those who operate with variable and uncertain costs. A member operating in an uncertain environment and without fear of an unexpected and sudden bull market increase in raw material prices can make business decisions that others can not. Marketing plans which emphasize stable selling prices of products are one such business decision.

As business executives become more familiar with commodity futures operations, they will be able to relate those operations to their corporate objectives.

Post Script

As this article was being submitted, *The Wall Street Journal* reported the following announcement on March 12, 1982:

> Hershey to Raise Price And Size of Candy Bars
>
> Hershey, Pa.—Hershey Foods Corp. said it will increase the weight and price of its candy bars, resulting in a lower cost per ounce.
>
> The wholesale price will rise 20%, Hershey said, while the weight of its milk chocolate and milk chocolate with almonds bars will increase 38%. The company's Reese's peanut butter cups will weigh 33% more.
>
> Hershey said the increases are in response to retailer's problems in dealing with different priced candy bars. "When some competitors increased the wholesale prices of their bars last year, resulting in a five-cent increase in retail price, Hershey didn't follow suit because we didn't believe our costs of doing business justified an increase," Earl J. Spangler, president of Hershey's chocolate subsidiary, said.
>
> Some retailers, however, found it difficult to establish a two-tier pricing system for candy bars, he added.

INTEREST RATES AND COMMODITY PRICES

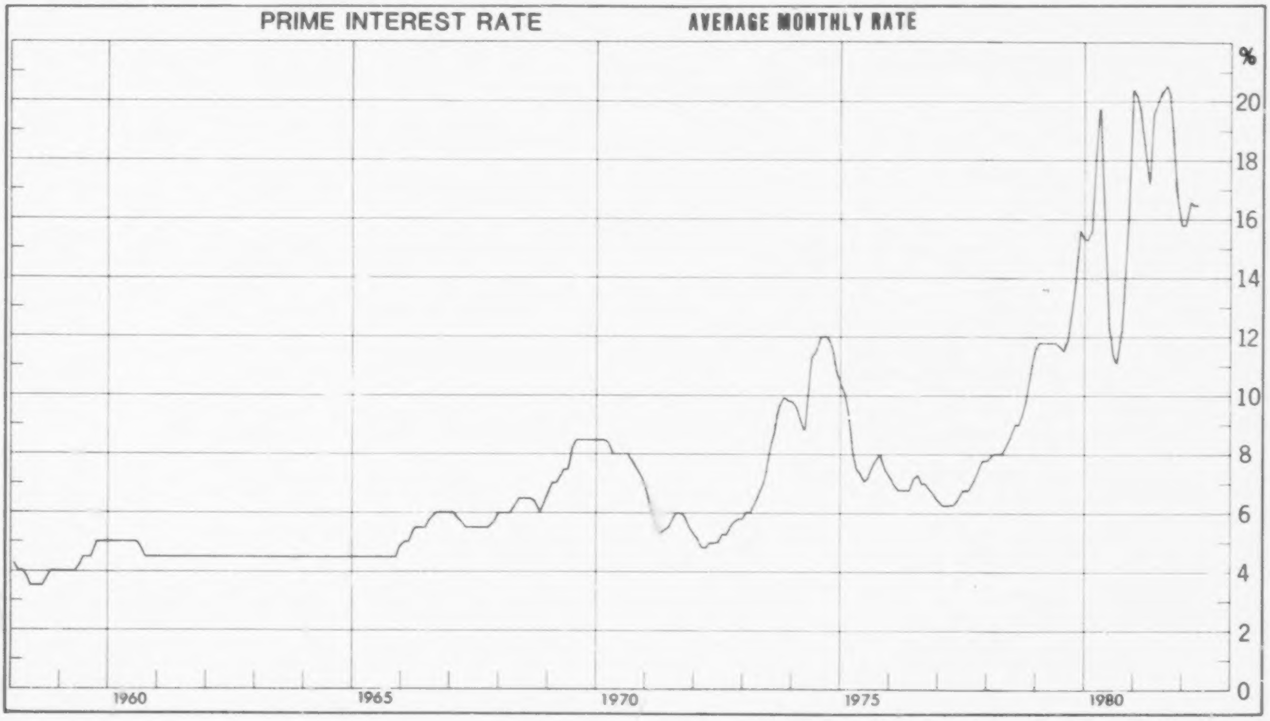
BY ALLAN R. ERMANN

Over the past several years we have witnessed dramatic fluctuations in both interest rates and commodity prices. The volume of trading in all the commodity futures markets increased sharply through 1980, reflecting the widespread interest in commodity prices and the use of these markets as potential "hedges" against inflation. For example, trading in the "traditional" grains and soybean complex markets expanded from 30.3 million contracts in 1979 to 39.6 million in 1980, a 23% increase. Moreover, public and corporate concern about interest rates was a key factor influencing the growth of the relatively young financial futures markets: financial futures trading volume jumped from 5.6 million contracts in 1979 to 12.5 million in 1980, a 55% increase. And, 1981 witnessed even greater expansion of financial futures trading volume to a total of 22.9 million contracts.

Throughout the last few years, many market news reports have regularly referred to the influence of interest rates on the commodity markets. And, via such price indicators as the Consumer Price Index (CPI) and Producer Price Index (PPI), both of which are affected by commodity prices, market news reports have also regularly referred to the influence of commodity prices on interest rates. However, few studies have actually related the two markets, and a number of misunderstandings may be commonplace.

In fact, as will be described in this study, a definite historical relationship exists between interest rates and commodity prices. Yet the nature of the relationship is complex. Commodity prices have been affected very differently by whether interest rates are steady, increasing, or declining. And, as seen many times recently, the effect of high interest rates on commodity prices can be devastating. For example, in December 1980 the prime interest rate increased from 17¾% at the beginning of the month to 20% on December 12, and to a peak of 21½% at mid-month. The quick succession of December's many small increases in the prime rate together became the "straw that broke the camel's back." In the first two weeks of December, almost all the commodity futures markets reacted simultaneously to the prime rate increases, and declined sharply. On December 1, 1980, the Commodity Research Bureau (CRB) Futures Price Index (base year 1967 = 100) stood at 329.0 (or 8.6 percentage points below its all-time high of 337.6, attained on November 20, 1980). The CRB Futures Price Index then experienced one of its sharpest declines ever, and by December 12 had fallen 30.2 percentage points to 298.9. The decline was not only sharp, but also broadly based. In those two weeks (based on the closing prices of the nearest futures contracts) corn prices declined by 36¢, wheat (Chi.) prices by 47¼¢, soybeans by 167¢, silver (N.Y.) by 335¢, coffee by 7.50¢, cattle (live) by 1.70¢, orange juice by 5.40¢, and hog prices by 3.85¢. A relationship between interest rates and commodity prices clearly exists.

But, at any point in time, any given commodity may, of course, behave quite differently from all the others, and may for all intents and purposes "ignore" interest rate trends. Rumors of large purchases of



U.S. cotton by China helped cotton prices in early December 1980. Thus, cotton prices increased by 1.13¢ from 90.50¢ to 91.25¢ during those same first two weeks of December 1980. Nevertheless, while being cognizant of such temporary aberrations, this study is concerned with the general relationships and patterns, and not those various exceptions.

These relationships exist in many forms. For instance, farmers faced with high interest rate charges for financing a new crop may cut back on planted acreage to the extent that production of that commodity declines. Assuming the economy is generally stable, it may support higher prices for this commodity. High interest rates can also become a cost that a producer or "middleman" will hope to pass on to the consumer. These relationships seem to indicate that higher interest rates influence higher commodity prices. And innumerable such relationships exist. But, high interest rates often are said to discourage demand, and thus work against higher commodity prices. This study attempts to resolve such apparent contradictions by examining how the relationships shift because of changes in the overall economic situation.

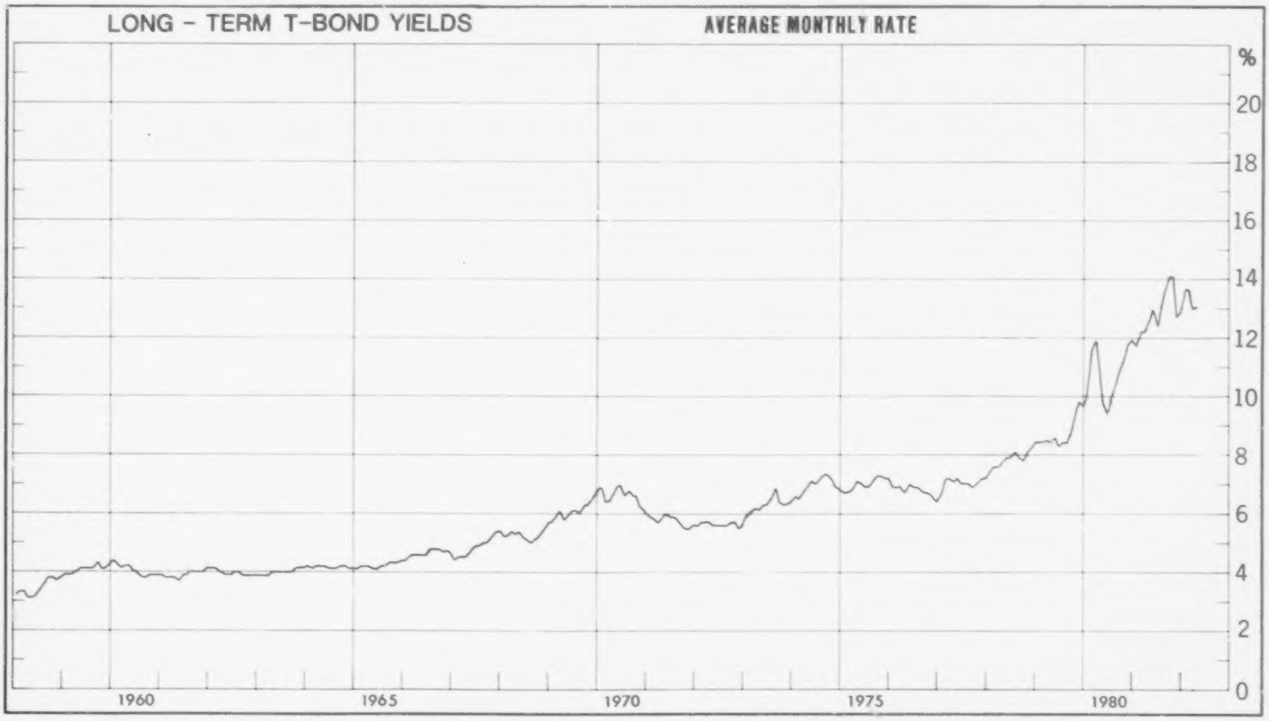
Economic Recoveries

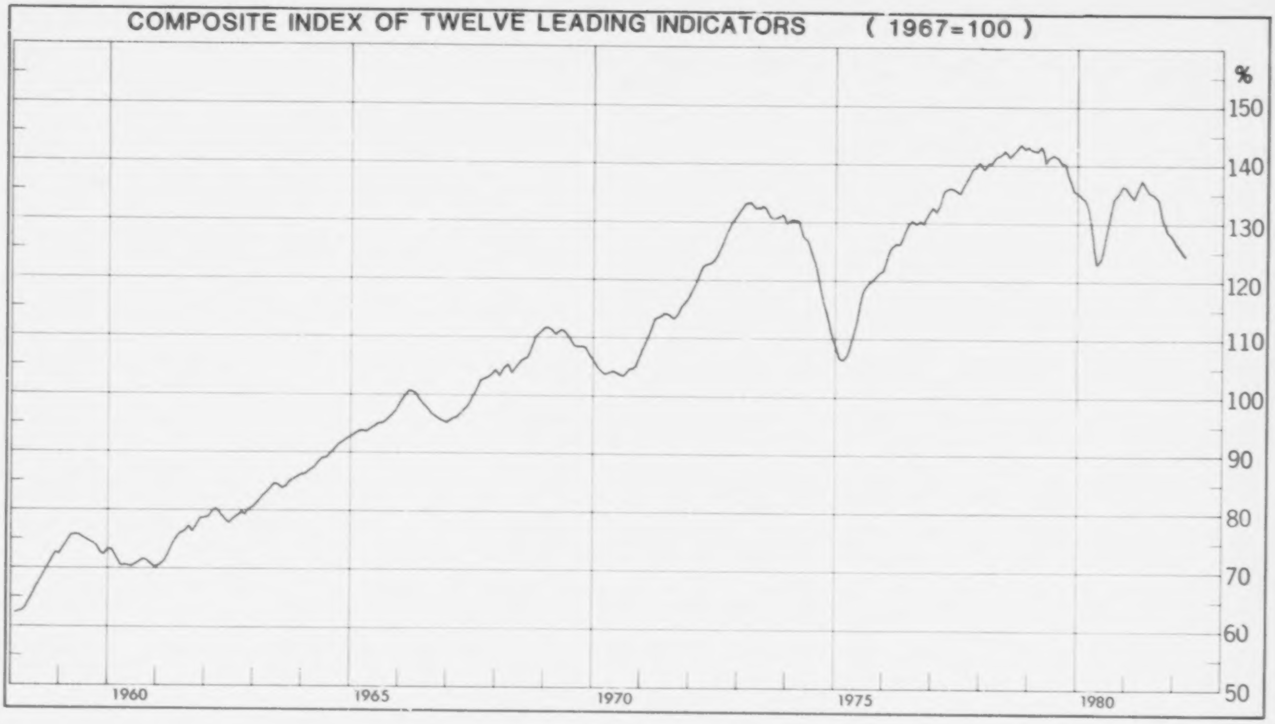
The relationship between interest rates and commodity prices during a period of non-inflationary recovery from a preceding period of economic weakness merits examination. Following is an example.

Between November 1973 and March 1975 the U.S. was officially in a recession, according to the U.S. Bureau of Economic Analysis. Then, starting near the end of the "official" recession, a recovery began, one without any immediately visible inflationary tendencies. The recovery may be said to have spanned the period between January 1975 and January 1978. The GNP increased from $1,454.7 billion to $2,011.3 billion in this period, while disposable personal income rose by 36%, and total "after tax" corporate profits increased by 90%. In the same period, the CPI increased only by 20% (from 156.1 to 187.1). After three years, the CRB Futures Price Index was almost unchanged, at 204.7 on January 2, 1975 and at 198.9 on January 2, 1978—though it fluctuated in a wide trading range in the interim. Thus, although the purchasing power of the dollar decreased relative to the CPI and the CRB Index, average incomes increased. But, as noted above, both disposable personal income and after-tax corporate profits increased at a relatively faster pace than the losses in the buying power of the dollar.

The relative steadiness in commodity prices probably played a major role in influencing the decline in interest rates during this January 1975 to January 1978 period. In January 1975, long term T-bond yields were averaging 6.68%, Federal funds 7.13%, and the prime rate averaged 10.05%. The shorter term Federal funds had declined to 6.70% and the prime rate to 6.25% in January 1978. The longer term T-bond yield was unchanged at 6.68%, perhaps indicating an awareness that a faster rate of inflation could or would soon follow.

Recently, many observers have expressed a belief that declining interest rates help commodity prices. But, a look back at the aforementioned statistics also reveals that a decline in interest rates does not necessarily spark increases in commodity prices. This key fact can again be observed in the economic recovery that first began in late 1960, when the Kennedy Administration was about to enter office.




COMPOSITE INDEX OF TWELVE LEADING INDICATORS (1967=100)

The first half of the nineteen sixties may be considered first as an initial one-year recovery after the April 1960 to February 1961 recession, and then as a longer period of sustained economic growth and expansion. In this section, we will examine the recovery.

In late 1960, the U.S. economy began to recover from the relatively minor recession that had just started in the spring of that year. The period between late 1960, when (according to the sensitive Leading Indicators) the recession bottomed, and late 1961 may best define this period of economic recovery. Officially, according to the U.S. Bureau of Economic Analysis, the recession extended from April 1960 through February 1961. Near the end of the recession, in the fourth quarter of 1960, the Gross National Product (GNP) stood at $503.3 billion. A year later, in the fourth quarter of 1961, the GNP was measured at $537.7 billion. Thus, the GNP, which had declined slightly in the third and fourth quarter of 1960, had registered a substantial 6.8% increase by the end of 1961 vs. 1960. The breadth of this year-long recovery can also be seen in the increase in total disposable personal income from $354.9 billion in the fourth quarter of 1960 to $364.4 billion a year later. Total corporate after-tax profits increased from $24.5 billion to $30.1 billion in the same period.

Moreover, this particular recovery year did not involve visible jumps in inflation or inflationary expectations. Almost by definition, that should have precluded major commodity price increases. If this is syllogistic reasoning, the 1960/61 recovery nevertheless must be included in this study to show how interest rates and commodity prices can change during such non-inflationary recovery periods. Thus, we note that in December 1960, the Consumer Price Index was 89.3% (base year 1967 = 100). In December, 1961 it was at 89.9%, or basically unchanged. The Bureau of Labor Statistics Spot Market Index stood at 96.4% in December, 1960 and at 99.6% a year later.

During the recovery in early 1961, interest rates moved upward. Just prior to the recession of 1960, in January, 1960 Treasury bond yields had averaged 4.37% and Federal funds 3.99%. By December 1960, when the recession was at its worst, T-bond yields had dropped to 3.88% and Federal fund rates had declined sharply to 1.98%. By December 1961, after the recovery was in progress, T-bond yields were up slightly, at 4.06%, while Federal funds were at 2.33%.

To recapitulate this period in further detail, the sensitive Federal funds rates had trended upward before the recession to a November 1960 peak of 4.00%. The rate then declined quickly as the recession developed, forming a trough at 1.16% in July 1961, and thus lagging the recovery which had started in February (according to most indicators). After July, the funds rate moved upward in an apparent response to the recovery in progress. The slope of the upward movement levelled in mid 1962, and Federal funds then steadied around 2.85% for almost a year.

The general upward tendency of the relatively volatile Federal fund (and even the T-bond) rates during this economic recovery period did not affect the historically less elastic prime interest rate. The prime rate rose to 5% in the period before the recession, then declined to 4½% during the recession. It held at 4½% through the recovery, and in fact for several years afterwards. Thus, Federal funds had sprung upward with some force, T-bonds moved slightly up, and the prime held steady throughout the recovery year.

The initial impact of the overall economic recovery on commodity prices in the mid-1960 to early-1961 period was somewhat spectacular relative to movement in the aforementioned interest rates. The sluggish economy into 1960 had caused many industrial and agricultural supplies to appear quite large relative to demand. As the economy strengthened, prices increased for those commodities where potential buyers had presumably been waiting for prices to bottom, where demand had backlogged.

For example, prices in the soy complex rallied in response to diminished exports to China, the inauguration of the Food for Peace Program, and a number of other developments that promised dramatic increases in U.S. exports. Soybean prices (cash No. 1 yellow, Chicago) quickly increased from a low of 207¼¢ in November 1960 to a March 1961 high of 307¼¢. But, it's not as though constructive news had been lacking prior to the November 1960 bottom for this commodity. After the 1960 harvest, it was already apparent that stocks were relatively small. The 1959/60 old crop carryover plus the 1960/61 production totaled 585 million bushels. The previous year's soybean use (or "disappearance") had totaled 570 million bushels. Obviously, it was already clear by the time of the October soybean harvest that any increases in disappearance rates from the 1959 level would draw on relatively small supplies, and thus be very constructive for prices.

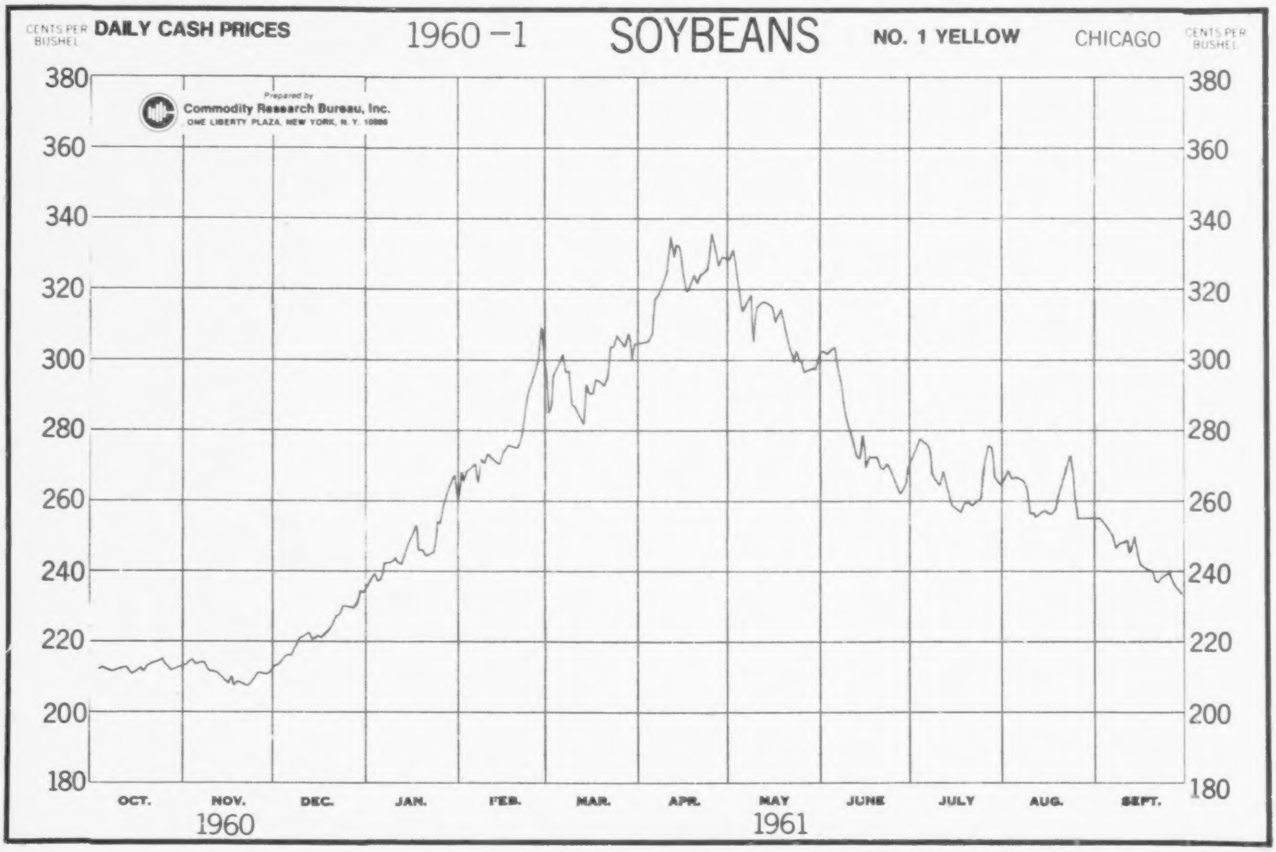
Because of a number of other factors (including the recession in the U.S. and elsewhere, and also questions about the then-upcoming election) the soybean futures market apparently ignored these potentially constructive developments in the soybean supply/demand situation. But the prices of such commodities as soybeans, for which a (potential) "backlog" in demand had developed, responded quickly and sharply to the recovery psychology—once that psychology "got rolling." The November 1960 to March 1961 price change in soybeans was almost a 50% increase. The overall commodity price level as measured by the CRB Futures Price Index (base years 1947–49 = 100), moved from a low of 81.91% in December 1960 to 90.25% by July 1961. (By then, soybean prices had retraced some of their upward move.) The CRB Index was at 87.06% at the end of December 1961—a number of other "price corrections" after the initial "burst" of the recovery had brought the overall price level down slightly from its July peak.

The December 1960 low in the CRB Futures Price Index coincided with the low in the Federal funds rate. Both trended upward as they entered the recovery year, 1961. Once the recovery was completed, and after the prices of such "back-logged-in-demand" commodities as soybeans adjusted upward, the general price level entered a wide sideways range.

Interest Rates and Commodity Prices During Periods of Economic Growth

The period between January 1962 and September 1965 deserves attention because it was a period of slow but steady economic growth with little visible inflation. It followed the 1961 economic recovery previously described. The prime interest rate, the basic interest rate that most directly affects corporate and personal economic decisions, stayed at 4½% throughout this time period.

The general economy was strong. Between January 1962 and September 1965, the Gross National Product increased 26% from $547.8 billion to $691.1 billion. Total corporate after tax profits increased 50%

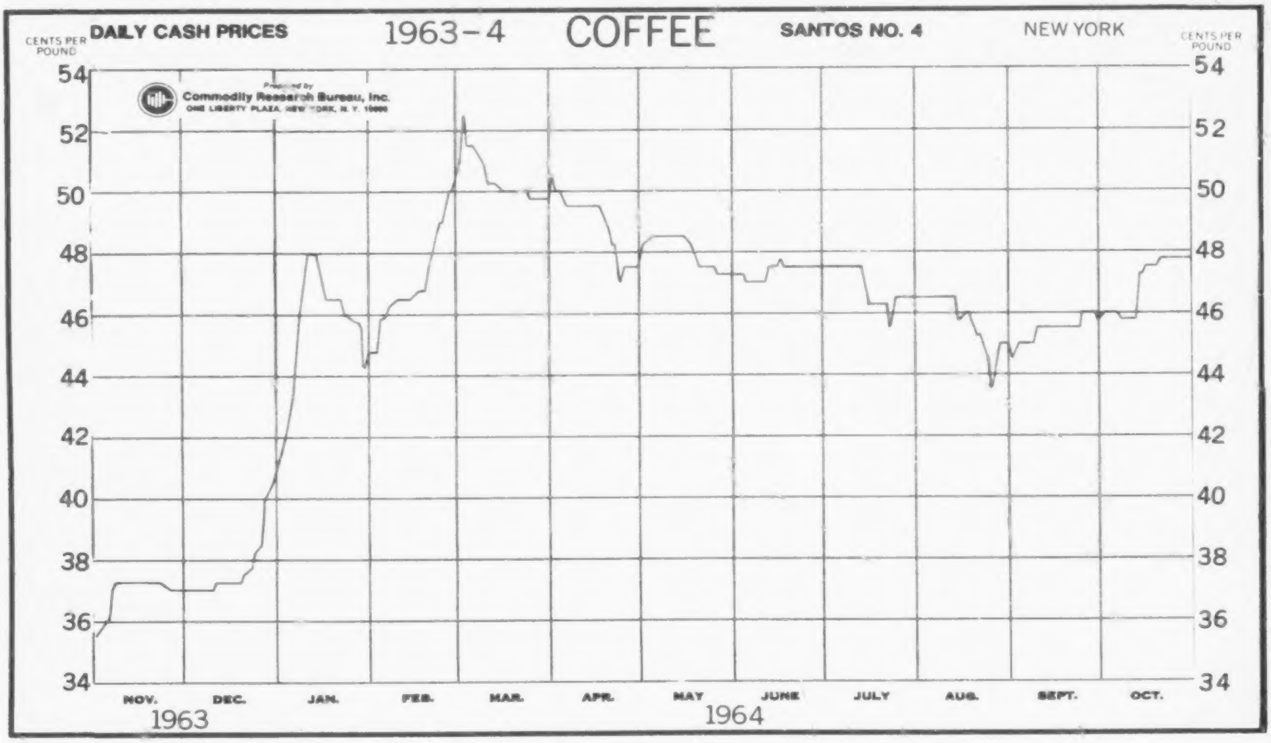


from $30.7 billion to $46.3 billion, while total disposable personal income went up 26% from $378.9 billion to $480.8 billion. However, inflation was negligible. The Consumer Price Index increased by only 5.4%, going from 89.9 (base year 1967 = 100) in January 1962 to 94.8 in September 1965. The CRB Futures Price Index was at 102.8 (base year 1967 = 100) on January 2, 1962 and at 102.1 on September 30, 1965. In the intervening years it had climbed as high as 112.1 (November 4, 1963) and fallen to as low as 97.6 (July 12, 1965). The key conclusion one may reach from the aforementioned statistics is that commodity prices in general appear to fluctuate in a wide sideways range during periods of relatively steady interest rates.

However, this is not to state that the exigencies of "normal" supply/demand developments cannot influence major changes in the price of any given commodity. For instance, the price of coffee (Cash, New York, Santos No. 4) went from 41½¢ per lb. on January 2, 1964 to 52½¢ per lb. on April 3, 1964, a 26% jump in just 3 months. This sharp price increase was influenced by export quotas under the then-recently-signed International Coffee Agreement, and by severe weather conditions that had badly damaged the Brazilian coffee crop. Clearly, any given commodity price can increase or decrease sharply regardless of interest rates.

But, in terms of this study, the subsequent decline in coffee prices is perhaps more important than the aforementioned price increase. By spring of 1962, it was reported that supplies of coffee were backed up in stores and warehouses throughout the nation, and coffee prices began to drop. The apparent unwillingness of consumers to pay for such an extraordinary price increase, and subsequent changes in the rate of coffee usage, may reflect many factors. Among them, though impossible to separate from the others, is probably the *lack* of inflationary expectations. That is, during a period of inflation, consumers may tend to adjust to higher prices without changing their level of use of a commodity. The widespread belief that most prices will go even higher at a later date encourages acceptance of "present" price increases. (Prices of any possible substitutes are also likely to trend upward.) Thus, large price increases by any particular commodity seem prone to an encounter with consumer resistance in non-inflationary periods. The "proof" is not in the one particular example—coffee—but in the overall sideways range of the general price level.

This section has shown how the general price level did not display any upward bias in the absence of marked inflationary tendencies. Again, the reasoning may be syllogistic. But, the less sensitive interest rates such as the prime were also basically steady in these years. And that steadiness in the rates seemed to create a level "range" within which commodity prices could fluctuate. Thus, during the period of relatively stable interest rates, "normal" supply/demand factors tend to be the primary causes of commodity price changes. Then, buyers and sellers "assume" reasonably steady interest rates and arrive at commodity prices in view of crop reports, weather conditions, export demand, etc. Such supply/demand factors are the "normal" components of any analysis of commodity markets. As will be seen, however, commodity prices tend to lead interest rates upward, until the "real" interest rates seem to become too burdensome. Then commodity prices collapse. In turn, declining commodity prices tend to lead rates down, until the newly lowered prices and interest rates manage to spark new demand.



Even in this 1962–65 period of apparently relatively steady rates and prices, underlying forces were renewing the upward trend of the inflationary cycle. Federal government expenditures increased steadily and slowly between early 1962 and mid 1965. Federal government receipts during those years were somewhat erratic. The net receipts (national income product accounts basis) generally shifted from surplus to deficit and back again every several quarters. By early 1966, in large part because of increases in Vietnam-war-related spending, the budget deficit began to grow steadily larger, and a budget surplus was not recorded again until late 1968. The stage was set for renewed inflation.

Inflation

The relationship between interest rates and inflation is of key importance. Inflation means that the buying power of the dollar decreases. It will be seen that it tends to be advantageous to borrow money in an inflationary period, and disadvantageous to loan out money. Thus, on one hand, money borrowed in an inflationary period can be invested in tangibles that are likely to gain in value; on the other hand, the money that was loaned out will have less buying power when collected at a later date—and along the way the set interest payments received will have decreasing buying power. Bond markets usually attempt to compensate for these disadvantages to the lending institutions by raising the interest rates to levels high enough to offset the rate of inflation expected for the period of the loan. When the interest rate markets function in this manner, interest rates tend to increase as the pace of inflation increases.

The effect of the above described process on commodity prices is complex. It may be understood as a kind of "battle for profits" between the lenders and borrowers. Commodity buyers are usually in the borrower's category because they frequently borrow money to finance their market transactions. Given the over-all tendency of commodity prices to increase during periods of inflation, the borrowers tend to be willing to borrow at increasingly higher interest rates. As long as the inflationary increases in commodity prices provide adequately large net profits, borrowers will be willing to "disregard" interest rates. (This willingness is one means by which inflationary expectations can fuel inflation.) Lenders tend to respond to inflation by pegging interest rates above the rate of inflation. If inflation were increasing at, say, an annual rate of 10%, lenders might charge 14% for intermediate term loans. The 14% would include 10% compensation for the anticipated rate of inflation. The remaining 4% represents the "real" rate of interest as opposed to the "nominal" 14% rate of interest which includes the 10% inflation factor.

Commodity Prices in Inflationary Periods

One of the largest jumps in the overall commodity price level in the post-World War II period came between September 1971 and June 1974. In that period, the general economy prospered, with the GNP increasing from $1,072.4 billion to $1,400.1 billion, total disposable personal income from $696.2 billion to $973.1 billion, and total corporate after-tax profits from $45.5 billion to $72.8 billion. In the same period, the CPI increased by a relatively small 20%, from 122.2 to 146.9. However, the rate of increase of the CPI was slowed by such lagging components as prices of durables (especially new cars) and housing rental costs. The more sensitive CRB Futures Price Index climbed from 96.8% on September 30, 1971 to 197.6% on June 28, 1974. Given the slight emphasis on food items in the CRB Index, it is apparent that the 140% increase in the overall costs of foods had far outstripped the roughly 40% increase in personal income and 60% increase in corporate after tax income.

The upward surge in commodity prices was given initial impetus by the large Soviet grain purchases in mid 1972. However, once the inflationary movement started, a number of forces acted in concert to speed its motion. The U.S. dollar was devalued in early 1973, and gold prices began their march upward. Most important, perhaps, was the response of the Middle East oil producers to the declining value of the dollar. In October 1973, OPEC increased its basic price for crude oil by 70%. Then, in January 1974, OPEC more than doubled the crude oil price. The OPEC price increases served to disseminate the inflationary spiral throughout the U.S. economy. In fact, before the huge size of the 1974 U.S. wheat and corn crops first became apparent, the CRB Index had peaked at 237.8 on February 26, 1974—a 145% increase from the 96.8 level on September 30, 1971.

U.S. interest rates responded sharply to these inflationary tendencies. Federal funds averaged 5.55% in September 1971, but were up to 11.93% in June 1974. Longer term T-bond yields increased from 5.56% to 7.02% in those years. And even the generally lagging prime interest rate jumped from a 6.00% average in September 1971 to an 11.54% average in June 1974.

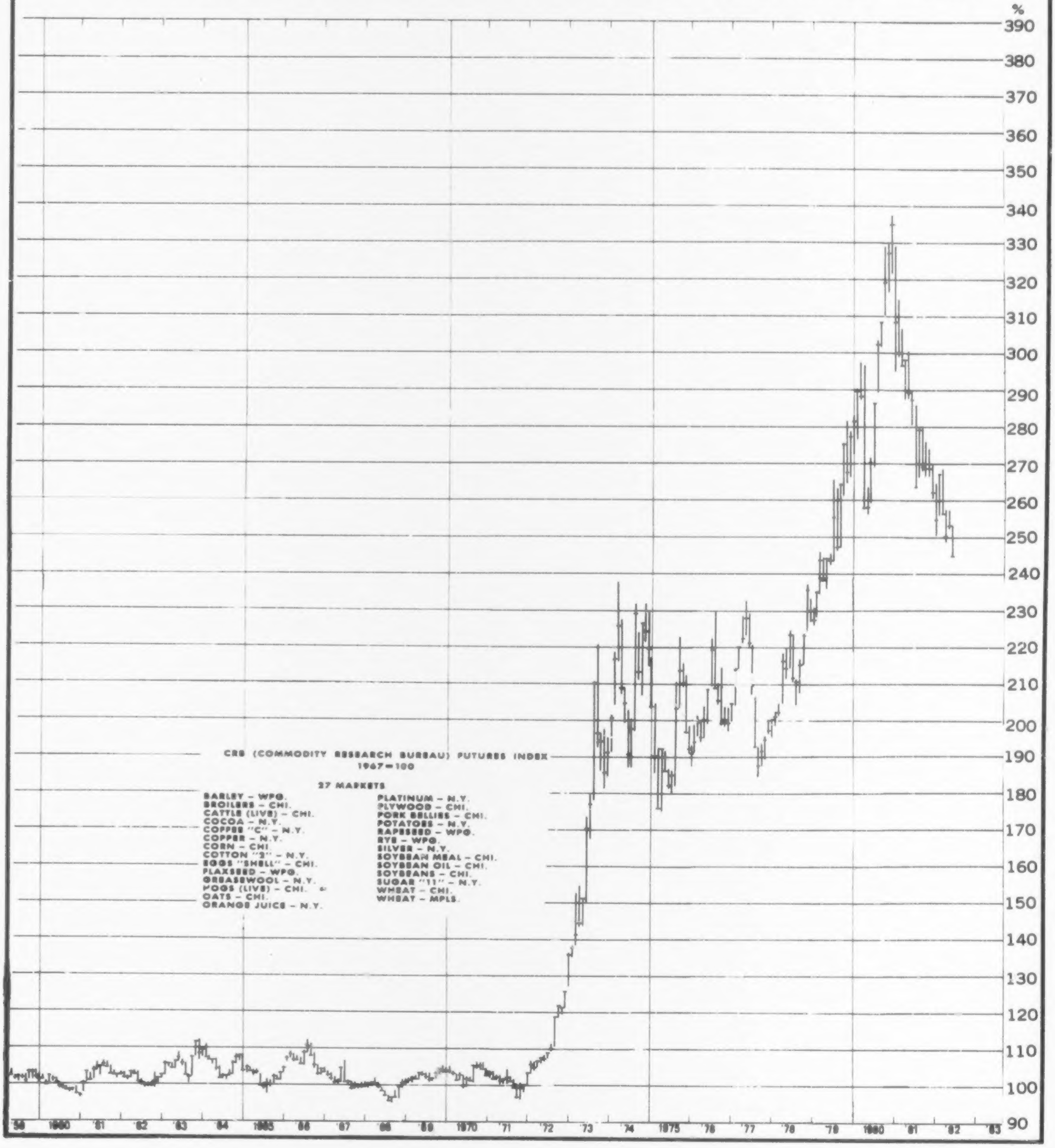
However, this process of commodity prices and interest rates racing upward together is not endless. The inflation-deflation cycle runs its course. Both interest rates and the general price level may initially move upward, though at different paces. For a long while, the interest rate markets may tend to lag slightly behind increasing commodity costs, and rates must be raised to compensate for further commodity and other price increases that lower the buying power of the dollar. But, at some point, interest rates fully anticipate and even perhaps over-anticipate the rate of inflation. When this occurs, and the "real" interest becomes relatively high, the acquisition and carrying of commodity inventories by the "trade" is discouraged and the profit potential for the "investor" may be virtually eliminated. In this way, interest rates, of necessity, increase during inflationary periods until the high interest brings about an economic correction.

Recessions

A brief word on recessions. According to the U.S. Bureau of Economic Analysis, the last five post-war recessions occurred between August 1957 and April 1958, April 1960 and February 1961, December 1969 and November 1970, November 1973 and March 1974, and January 1980 and July 1980. In all five instances, most interest rates began to decline in the first half of the recession—sometimes at a very early point in time in apparent anticipation of the recession. They have tended to remain low for some time after they have bottomed—that is, they rarely spring right back up. The period after the 1980 recession is an exception. But, in many ways that recession was aborted midway in its "life," and (before many industries had recovered) was replaced by the recession that began in 1981. At a later date, these two recessions may be considered as one. In fact, many key economic indicators (such as the Composite Leading Indicators) had still failed to regain their pre-1980-recession levels when the "next" recession began.

Sensitive commodity prices have (in the periods

COMMODITY RESEARCH BUREAU FUTURES PRICE INDEX



previously described) tended to decline sharply in anticipation of a recession, and then to slowly move upward in the ensuing recovery period.

High interest rates can, as noted, continue well into a developing recession—basically until the interest rate markets assume the slowdown is adequate to deter inflationary tendencies in the economy. Thus, when a recession is beginning, the higher interest rates can (temporarily) work in tandem with reductions in corporate and individual disposable income to decrease demand for commodities. Corporate (and personal) borrowing often increases in early stages of a recession, reflecting the financing of inventories while sales slacken and the efforts to obtain funds in lieu of sales revenues. But such borrowing cannot continue to compensate for diminished revenues. Once such borrowing decreases, it helps interest rates to decline. The subsequent working down of inventories (and production curtailments and price reductions) is, in a sense, the recession itself. And the (relative) depletion of inventories allows for subsequent recoveries.

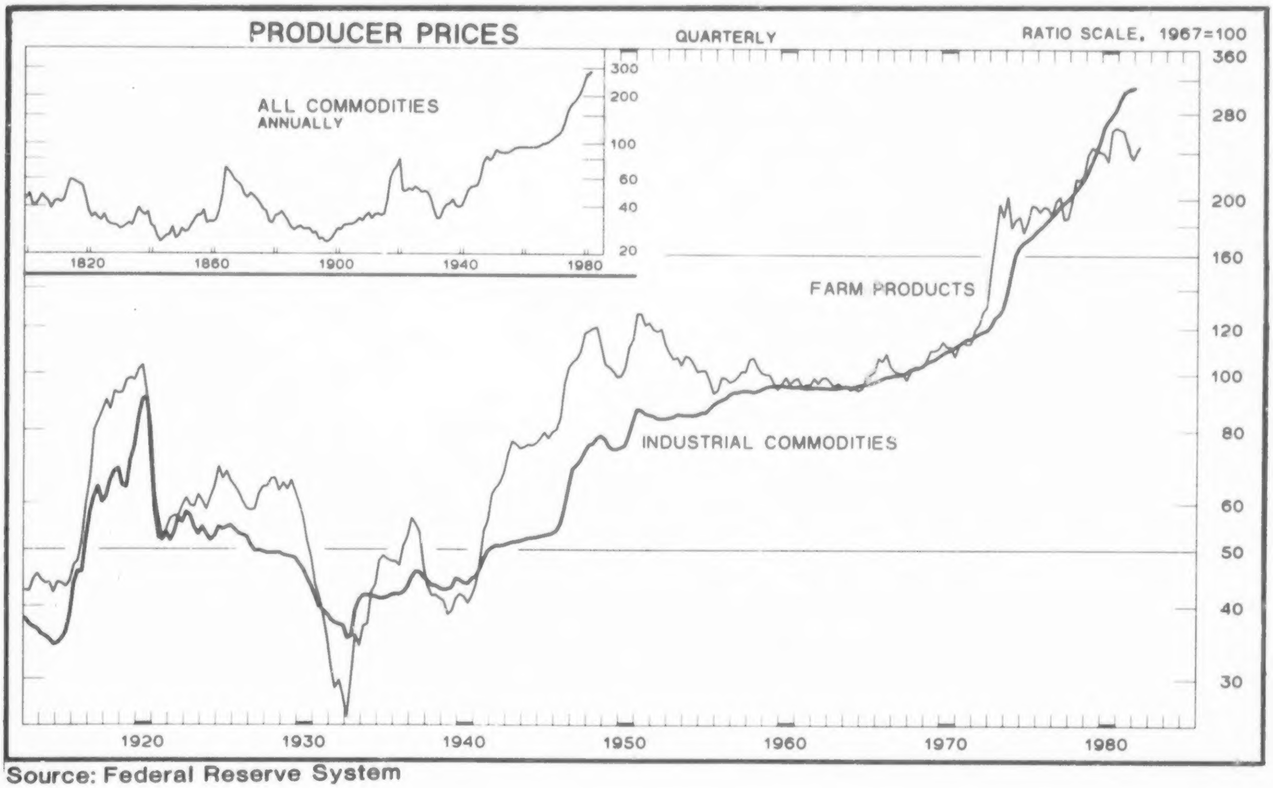
Clearly, both interest rates and commodity prices decline in recessionary periods, though the sensitivity which may allow one market or the other to first "detect" the recession may vary.

However, it is apparent that a study on the ever-changing trends in interest rates and commodity prices cannot have much concern with a static entity such as a recession. A recession is, by definition, two or more consecutive quarterly declines in the GNP; thus, it is a convergence of many economic trends.

A similar but far slower process occurs during depressions. Between 1930 and 1940, U.S. Government bond yields declined by 50% from near 4% to near 2%. The major decline in rates did not begin until 1932, a few years after the start of the decline in the stock market and the parallel 50% drop in industrial production. During the 1930–1940 period, commodity prices (as measured by the 2,000 Commodity Wholesale Price Index 1957–1959 = 100) declined from around 52% in 1930 to just under 34% in 1933, bottoming just a year after interest rates topped. Following 1933, an erratic recovery began. But the Commodity Wholesale Price Index did not surpass the 50% mark until 1942, after the start of World War II.

Interest Rates and Commodity Carrying Charges

Carrying charges (or carrying costs) are the expenses incurred in storing a commodity. The carrying charges comprise storage charges, insurance costs, and interest payments. Carrying charges are a main reason why the price of the deferred delivery contract in the futures market is often above that of the nearby contract. In a "carrying charge" market (also called a "contango" market) the higher price of the deferred delivery contracts reflects at least part of the costs of storing the commodity until that deferred delivery date. It may be said that, in general, interest rates constitute the largest portion of the carrying charge for any commodity. For example, if one bushel of soybeans costs $7.00, carrying costs per month would include a monthly financing charge of 9.3 cents (at a 16% interest rate). Thus, in a period of rising interest rates, the price of the deferred delivery is likely to increase relative to the nearby. The price of the deferred contract would tend to decrease relative to the nearby in a period of declining interest rates.



Source: Federal Reserve System

Interest Rates and the Exchange Value of the Dollar

Under certain circumstances, high interest rates can affect commodity prices in another way. When U.S. interest rates are higher than those in other nations, the difference can influence a flow of foreign funds into U.S. financial instrument markets, and thus influence a stronger U.S. dollar in those foreign exchange markets. And, a stronger U.S. dollar, in turn, adversely affects U.S. exports.

A potential foreign buyer of U.S. soybeans at around, say, $7.00 per bushel would have to exchange his currency for U.S. dollars to make his purchases. If the value of the dollar increased during the period in which he was considering the purchase, he would require progressively greater amounts of his currency to purchase the same amount of soybeans. His costs would therefore increase. Seen as part of a larger picture, such increases in the exchange value of the U.S. dollar could have a negative influence on export demand for U.S. commodities.

For example, in early 1981, the futures prices of many U.S. commodities declined. However, the declines apparently did not whet the appetites of many international buyers, partly because the U.S. dollar gained in value relative to many major currencies during the same period. For many international buyers, the resulting gain in the dollar's exchange value offset much of the commodity price declines. (Factors other than interest rates of course affect the exchange value of a currency.)

Special Commodity Spreads and Interest Rates

A particular form of the carrying charge on certain commodities actually serves as the basis for a trading vehicle. The difference between the price of the nearby futures delivery and any of the deferred delivery contracts is called a "spread." Spreads in most commodities reflect supply/demand factors as well as interest rate-related carrying charges. However, the spread in gold contracts tends to reflect only carrying charges, with interest rates being the key variable. Thus, gold market spreads are often traded to reflect expectations in interest rates.

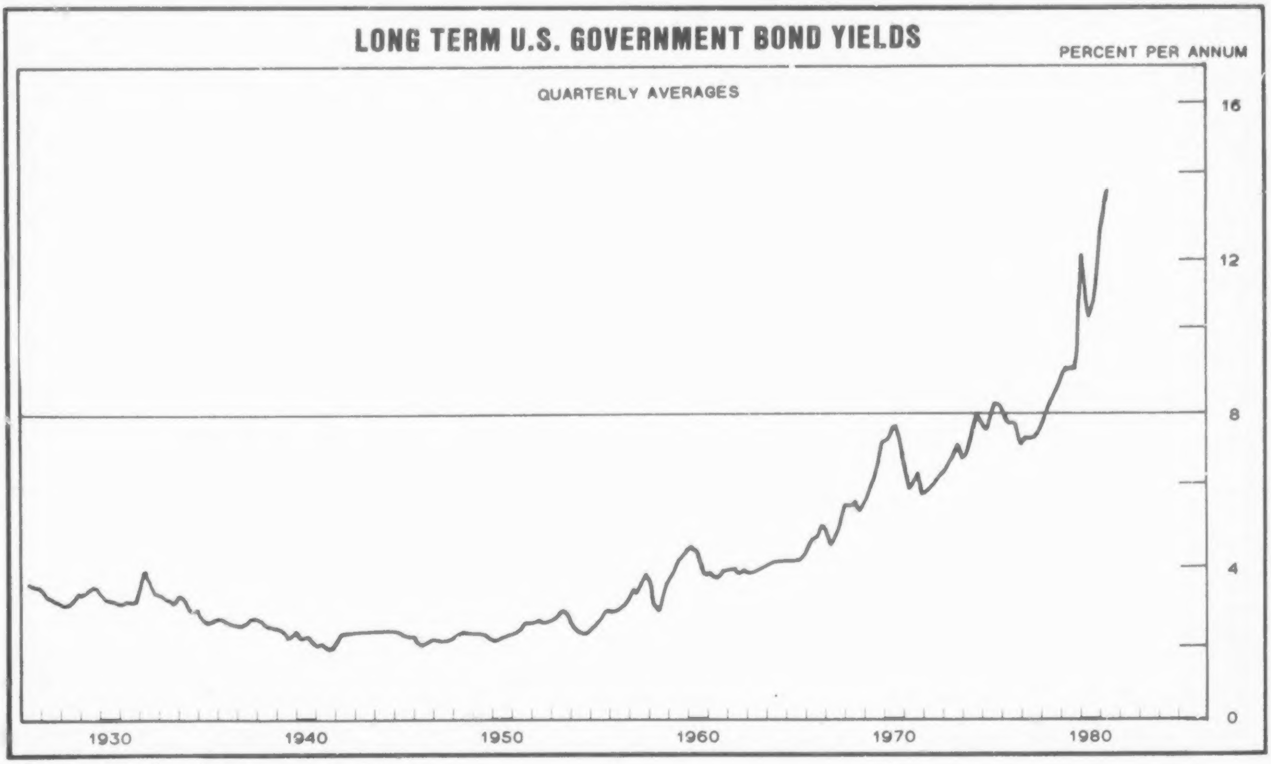
For example, on January 26, 1982 the April 1982 Comex gold futures contract closed at $384.10 per ounce, while the June 1982 contract closed at $392.10. The futures market is "charging" $8.00 for the carrying charges between April and June, or $4.00 per month. Assuming $0.05 per ounce per month charges for insurance and storage, we can set up the following formula to discover the interest rate implied by the gold spread:

$$\frac{\text{June Cost—April Cost—Insurance/Storage for 2 Months}}{\text{April Cost}} \; \frac{360}{60 \text{ Days}}$$

$$\frac{\$392.10-\$384.10-\$0.10}{\$384.10} \; \frac{360}{60} = 12.34\%$$

The interest rate implied in the gold spread is generally referred to as the "implied repo rate."

If a trader thought that interest rates were going to increase, he might "buy the spread." That is, the trader would buy the June contract while simultaneously selling the April contract. If indeed interest rates went up, the June contract would gain relative to the April. (Presumably, this should happen whether



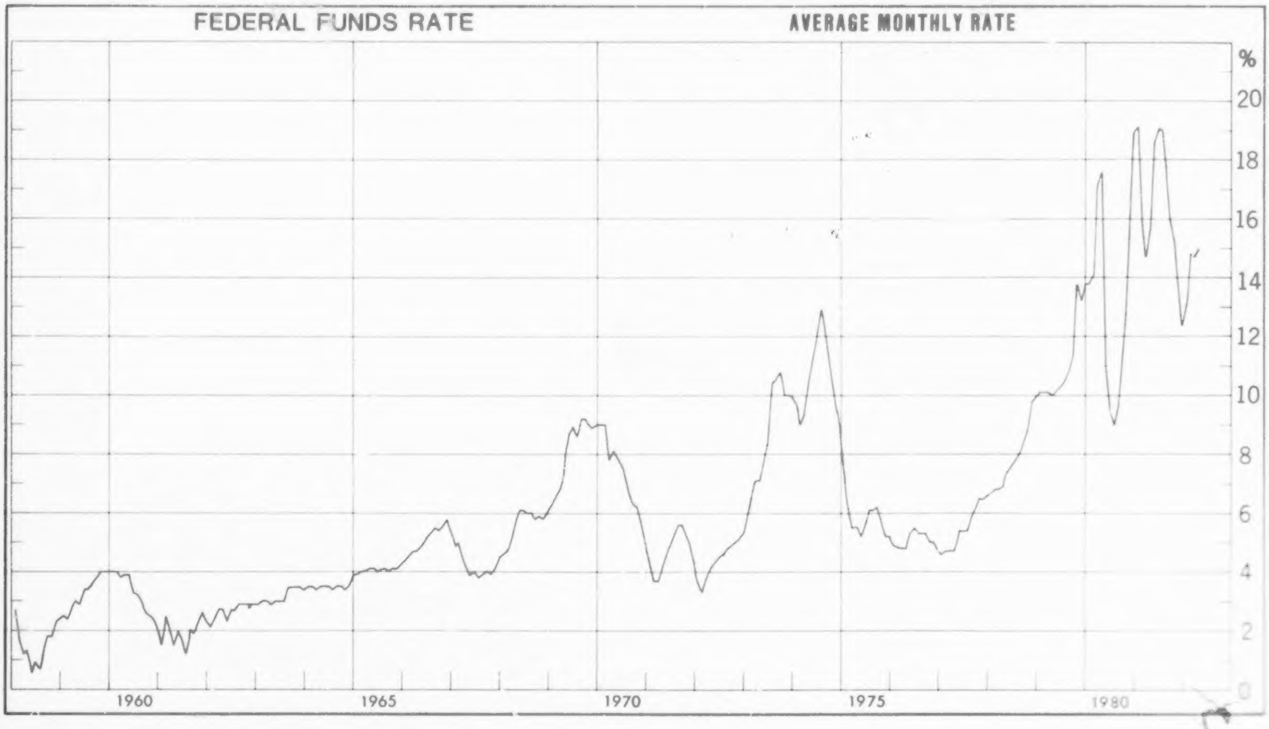
Source:Federal Reserve System

the price of gold was increasing or decreasing.) If interest rates went down, our spread trader would lose money, while a trader who had bought the April contract and sold the June would profit.

Some Recent Developments

Historically, interest rates have tended to decline during recessionary periods of generally declining commodity prices. This tendency appears likely to continue. However, recent Federal Reserve monetary policies could exaggerate the lag between the decline in the general price level and a decline in interest rates. Since late 1979, the Federal Reserve has followed a policy of (indirectly) encouraging higher interest rates in any time of perceived excessive growth in the money supply, and of (indirectly) encouraging lower interest rates in times of apparent excessive shortage in the money supply. One assumes that a recession would be a period of slowed money supply growth, perhaps even of contraction. However, in the 1973–74 recession initial declines in the money supply appear to have resulted largely from major decreases in consumer installment credit and other private borrowing. Corporate borrowing continued strong for a longer period. In fact, corporate bank loans (bank loans to business) increased sharply through the first third of that recession. Part of the reason for large corporate borrowings may have been the need to finance inventories, which in 1973–74 continued to increase well into the economic slowdown. Were such a process to be repeated under the 1981–1982 Federal Reserve monetarist policies, it would explain the money supply growth that took place in late 1981 and early 1982 while the recession was still developing. Financing of inventories during the recession is likely to influence later corporate decisions to stop financing inventories, and instead deplete them as soon as possible. Money supply indicators could decline sharply after such a lag, and interest rates would then resume the downward trends that are historically appropriate during times of recession.

However, it is important to recognize that the effect of interest rates on commodity prices can be understood in terms of supply/demand. As noted, decreasing interest rates generally do little to either spark or suppress demand, but increasing interest rates can stifle demand in a number of ways.



THE EXPANDING WORLD DEMAND FOR U.S. SOYBEAN MEAL

BY RICHARD A. LOEWY

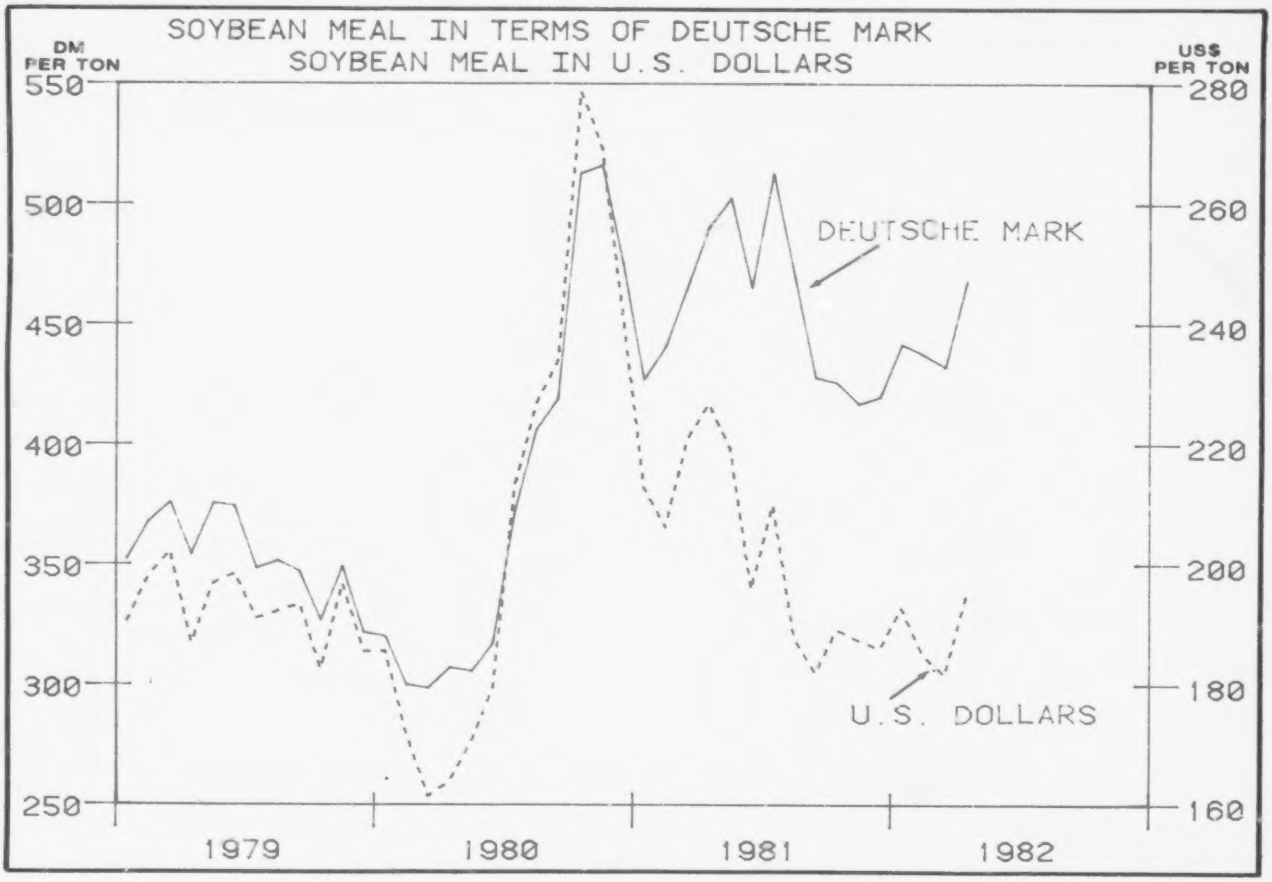
The substitutability of oilseeds and their corresponding products is prompted primarily by protein requirements of livestock for meals and the end use consumption of vegetable oils. Of secondary importance is price competitiveness, particularly of vegetable oils, but significant soybean meal substitutability was enhanced in the 1980/1981 crop year for the following reasons:

(1) The United States experienced a severe drought resulting in a soybean production shortfall of 1,792 million bushels. In the same year there was a record-breaking Brazilian soybean crop of 15.5 million metric tons (569.5 million bushels). The net result was that Brazil was able to successfully compete against the U.S. in the export market for soybeans and products.

(2) The U.S. dollar was strong against European currencies and the Japanese yen for only the second year in the previous ten. The cost of purchasing U.S. soybeans, soybean meal, and corn was prohibitive for the Japanese, Dutch, and West Germans in terms of their own respective currencies. Chart 1 shows the cash price of soybean meal in terms of both U.S. dollars and the Deutschemark.

The high cost to the West Germans remained even after U.S. soybean meal declined by $37.70 during the devastating downward price swing during December of 1980. The U.S. dollar's strength, in conjunction with repetitive devaluations by the Brazilians and Argentines, further exacerbated their competitive export edge. Furthermore, the South American soybean meals generally contain 50% protein versus the North American 44% standard. Additionally, the Brazilian government permits tariff-free imports of soybeans if the processed products are to be utilized for export. The Brazilian government export arm, Cacex, has liberalized exports of soybeans and products for 1982/83 without exporters having to comply with domestic consumption requirements first. Brazil (through April 15, 1982) has increased soybean meal exports 12.5 percent above the volume for the comparable time frame in 1981, reflecting strong product export emphasis, despite negative Brazilian crushing margins.

(3) The Russian disenchantment with Brazilian soybean meal due to previous problems with swine disease abated when the Brazilians proved up to the task of mastering quality control problems. Conse-



quently, the U.S.S.R. has found a reliable non-U.S. soybean meal source besides the EEC countries, which have only recently exported significant volumes of soybean meal to the Soviet Union.

(4) A number of foreign countries have shifted at least some of their purchases away from the U.S. market: the U.S.S.R., in the aftermath of the U.S. grain embargo on the Soviet Union; Iran, after the Iranian hostage crisis; Mainland China, after the sale of U.S. weapons and spare parts aid to Taiwan, its avowed enemy; India, following the large volumes of P.L. 480 vegetable oil granted by the U.S. to Pakistan, a historic and present enemy of the Indians. The U.S.S.R. locked-in the Brazilian and Argentine crops with Five-Year Agreements to supply minimum volumes of soybeans and products.

All of these factors had a very strong dampening effect on U.S. exports. They are examples of political considerations that changed oilseed meal usage. The additional factor of severe recessions in Europe and Japan paved the way for the even greater substitutability of traditional use of soybean meal. Moreover, these negative factors still permeated the market during the 1981/82 crop year.

United States

In the United States, the three principal types of high protein feeds—oilseed meals, animal byproducts, and grain-milling byproducts—are not nutritionally equal. Each is unique on the basis of its crude protein, digestible protein, and amino acid content.

Oilseed meals account for between eighty and eighty-five percent of all high protein feeds used in the U.S. Animal byproducts constitute ten percent and grain byproducts account for from five to ten percent of total high protein feeds. Soybean meal constitutes approximately seventy-five percent of total oilseed meals used in this country. Other oilseed meals that could be utilized interchangeably, contingent on livestock nutritional requirements, are cottonseed, peanut, sunflower, linseed, and safflower meal. The crude protein content of oilseed meals ranges from twenty to fifty percent, while the crude fiber content is from 1.5 to 10.0 percent. Soybean meal varies between forty and fifty percent crude protein. Usually, oilseed meals contain a good mix of essential amino acids, which accounts for the popularity of oilseed meals as a protein feed.

Animal byproducts include meat meal, tankage, feather meal, and various fish meals. Their crude protein content ranges from thirty to eighty percent, the highest level of the three feed groups. In addition to having a good mix of amino acids, animal byproducts often contain relatively large proportions of two essential amino acids, lysine and methionine, which other high protein feeds often lack. To achieve a non-ruminant feed with a good amino acid profile, animal byproducts are mixed with other high-protein feeds and meal, wheat germ, distillers grains, and sorghum gluten meal. Grain byproducts tend to be in the same twenty to fifty percent crude protein range as oilseed meals. Grain byproducts are often included in a feed ration because of their cheaper cost versus other high protein feeds. However, grain byproducts alone cannot supply the amino acid profile required by non-ruminants.

Since 1965, high protein feeds have consistently accounted for eleven to thirteen percent of the total concentrate feeds consumed. Significantly, soybean meal has increased its share of the high protein market from slightly over fifty percent in 1965 to seventy-five percent by 1979. It is interesting to note that while soybean meal fed doubled from ten million short tons in 1965 to almost twenty million short tons in 1979, all other high protein feeds combined were declining from eight to 6.5 million tons over the same period. Soybean meal today unequivocally dominates the high protein feed market, primarily due to its wide availability, high quality, and relatively low cost.

A good perspective of U.S. oilseed meal use in processed feeds is presented in Table 1.

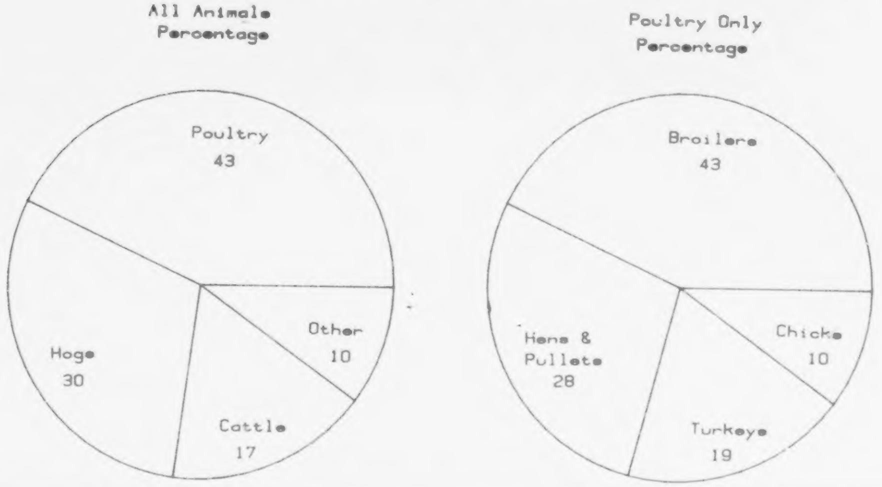
Table 1
U.S. Oilseed Meal Use, 1977–81 Year Beginning October (1,000 metric tons)

Oilseed Meal	1977	% Share	1978	% Share	1979	% Share	1980	% Share	1981	% Share
Soybean	14,766	88	15,758	89	17,113	88	15,646	91	16,012	88
Cottonseed	1,780	11	1,534	9	1,641	9	1,395	8	1,628	9
Linseed	79	—	122	1	146	1	117	1	100	—
Peanut	92	1	93	—	108	—	85	—	114	1
Sunflower	—		180	1	359	2	40	—	430	2
Total	16,717		17,687		19,367		17,283		18,284	

Source: USDA

Soybean meal in processed feeds as a percent of other meals has consistently averaged about eighty-nine percent in the past five years, and cottonseed—nine percent. The nutritional and competitive price advantage of soybean meal over other meals (due to large soybean production vis-a-vis other oilseeds) should continue. This advantage should be further enhanced when normalized grain trade between the U.S. and U.S.S.R. (disrupted by the Carter trade embargo against the Soviet Union) is resumed. The net result should be consistently higher soybean planted acreage in the United States.

CHART 2 High-Protein Feed Consumed by Livestock Class in 1979



Source: USDA

Non-ruminants (primarily hogs and poultry) are the major consumers of high protein feeds, accounting for seventy-three percent of the total. Ruminants (principally cattle), consume the residual. Ruminants are fed substantially less high protein feed, because they are able to derive protein from other sources, such as urea and roughages.

Hogs

Hogs and broilers are the largest consumers of soybean meal. In 1979, hogs were fed thirty-four percent of all soybean meal consumed and broilers eighteen percent. This nearly parallels the proportions in 1965. However, other poultry classes reduced their share over the fifteen-year period, from thirty-two to twenty-three percent. Even though nonruminants consume the largest portion of soybean meal, ruminants have been increasing their share. In the late 1960's ruminants consumed between ten and fifteen percent of the total soybean meal feed. Since the early 1970's, the ruminant's share has increased to twenty percent.

The major high protein feed fed to all hogs between 1965 and 1979 was soybean meal. Hogs normally consume about a third of the total soybean meal fed to all animals and slightly less than a third of the total high protein meal. Consumption of high protein feeds and soybean meal increased between 1965 and 1979 principally because of increases in both hog numbers and the amount of protein fed to each animal. Feeding rates increased because of expanded confinement feeding.

Table 2 U.S. Hog Feeding Trends

Crop Year (Oct.-Sept.)	Hogs Fed (million animals)	Total Soybean meal fed	Total High Protein feeds fed
		(10,000 tons)	
1965	81	408	532
1970	102	561	684
1975	77	557	665
1979	104	679	831

Source: USDA

The rise in feeding rates was not constant. Rates tend to change during the course of the hog cycle as the proportion of barrows and gilts to sows changes. Soybean meal feeding varied from 95 to 145 pounds per hog, and the high protein feed rate was from 100 to 173 pounds.

Broilers

About seventy-five percent of high protein fed to broilers during the 1965–1979 period was soybean meal. Broiler rations remained relatively constant at about 2.5 pounds of high protein feeds. Slightly less than two pounds of this was soybean meal. Broilers are the second largest consumers of high protein meals, accounting for about seventeen percent of both total high protein meal and soybean meal consumption. The amount of high protein meal fed to broilers increased from around three million tons in 1965 to about five million tons in 1979. Commensurately, soybean meal nearly doubled from two million to about 3.7 million tons.

Table 3 U.S. Broiler Feeding Trends

Crop Year (Oct.-Sept.)	Broilers Fed (millions)	Total Soybean Meal Fed	Total High Protein Feeds
		(10,000 tons)	
1965	2,569	2.01	3.10
1970	2,944	2.65	3.82
1975	3,285	2.96	3.98
1979	4,108	3.68	4.96

Source: USDA

Feeding rates changed very little during the 1960's and 1970's. Almost all of the increase in the total amount of protein fed to broilers was due to more broilers being produced annually.

Cattle

Soybean meal as a percent of the total high protein meal fed to all beef cattle (including cow/calf operations and feed lots) increased from about fifteen percent in 1965 to over seventy-five percent in 1979.

Beef cattle rations increased from 36 pounds of high-protein meal a head in 1965 to 47 in 1979.

In 1979, beef cattle consumed about ten percent of the total high protein feeds and soybean meal used by all livestock. However, between 1965 and 1979, the total amount of high protein meal fed to beef cattle increased by sixty percent, while soybean meal jumped by over eight hundred percent. During the same period, the quantities of cottonseed meal consumed by beef cattle declined by seventy-three percent, reflecting a major shift to soybean meal.

Table 4 U.S. Beef Cattle Feeding Trends

Crop Year (Oct.-Sept.)	Cattle Fed (million animals)	Total Soybean Meal Fed	Total High Proteins
		(10,000 tons)	
1965	77	0.20	1.39
1970	88	1.35	2.22
1975	113	2.07	2.71
1979	96	1.72	2.23

Source: USDA

EEC

The European Economic Community (EEC) has been the largest protein meal consuming market in the world and utilized twenty-eight million metric tons in 1979/80 compared to the twenty million metric tons fed in the U.S. Livestock feeders in the European countries are particularly sensitive to developments in market prices for feedstuffs. Influenced by higher protein prices, particularly of soybean meal in 1980/81, usage was cut significantly.

Relatively cheaper protein meal prices, compared to feed grains, have been a significant factor in the larger proportionate use of protein feeds in the EEC's livestock feeding ratios in the past. From 1977 through 1979, a cheaper U.S. dollar relative to most European currencies along with abundant U.S. supplies of oilseeds kept protein prices low relative to EEC internal oilseeds and grain prices. Of particular significance was the response in the EEC to lower relative prices for meal in 1977/78 when consumption of protein meal jumped by over twenty-five percent with only about a five percent increase in livestock production. Much of this increase was attributed to a more substantial use of protein meal per unit of livestock production encouraged by a more than twenty percent drop in meal prices relative to grains.

Relative prices for soybean meal rose by seventeen percent in 1980/81. Protein use in Europe dropped below the prior year's level as European producers adjusted their feeding mixes to include less protein based feeds. The slowdown in protein meal feeding was offset by increased usage of cheaper grain. The use of the substitute feeds, manioc (tapioca) and corn gluten, are presented in Table 5.

Table 5
EEC Net Imports of Corngluten and Tapioca
(In 000 metric tons)

	1977	1978	1979	1980	1981
Corngluten	1,465	1,634	1,959	2,501	2,774
Tapioca	3,675	5,646	5,047	4,663	6,160
Total	5,140	7,285	7,006	7,164	8,939

Source: Oil World

The EEC countries also increased rapeseed meal usage as a percentage of soybean meal usage in 1980/81. The record-breaking rapeseed production in France enhanced EEC supplies. Record rapeseed production in nearby Poland also supplemented EEC supplies. The substitutability of rapeseed dampened EEC soybean imports in 1980/81 by 15.2 percent to 10,246 thousand metric tons from 12,085 thousand metric tons in 1979/80. Soybean meal imports rose two hundred seventy thousand short tons in the same period, due to poor crushing margins, particularly during the latter half of the 1980/81 crop year.

USSR

The Soviet Union has been a good growth market for protein feed over the past several years. The Soviets are expected to continue to upgrade protein deficit feeding even though internal livestock production might be down. Russian oilseed production has been consistent vis-a-vis hectare allocation.

Soviet soybean production over the 1975–80 period has averaged five hundred thousand metric tons, sunflower production approximately five million metric tons, cottonseed production five million metric tons, and other oilseeds five hundred thousand metric tons. The total average oilseed production was eleven million metric tons.

The Russians continue to increase soybean meal imports in conjunction with increased protein requirements. Given continuing stable oilseed production, the Russians will increase soybean meal imports annually from five to eight hundred thousand metric tons. It is anticipated that the Russians will increase the 1980/81 soybean imports of 1.3 million to 1.8 million metric tons for 1981/82.

Since the grain embargo, the Russians have not procured U.S. origin soybean meal. EEC soybean meal exports to the U.S.S.R. increased from 346 thousand metric tons in 1980 to approximately 700 thousand in 1981. In 1982 it was anticipated that the EEC export volume to the Soviets would be 900 thousand metric tons and the Brazilian export volume to the U.S.S.R. should be of the same magnitude. In addition, Spanish crushers who have been augmenting soybean oil exports to India and North Africa should have large supplies of soybean meal available for export to the Soviets. Thus, crushers in Spain may compete more actively with Dutch and West German crushers for Soviet soybean meal business.

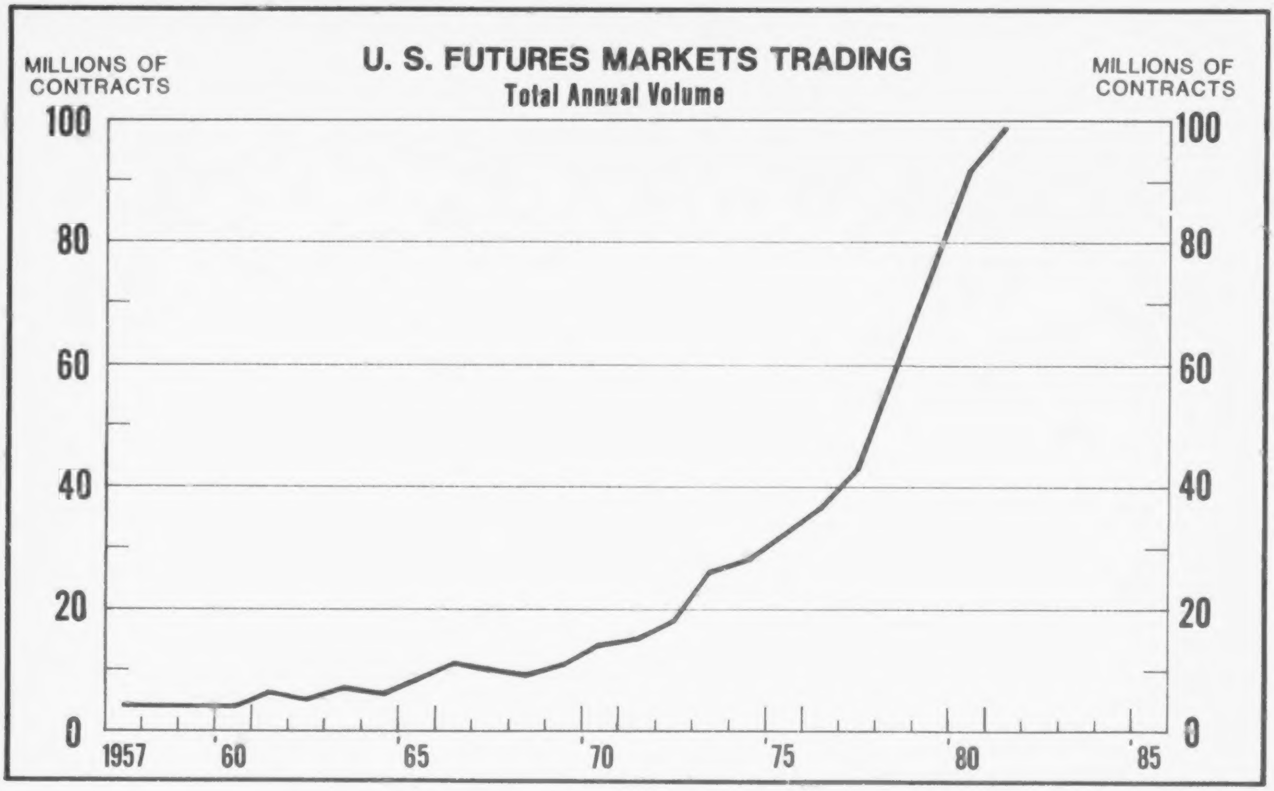
Conclusion

Oilseed product interchangeability is a significant factor in the analysis of oilseed meals. Extreme demand elasticity and the competitiveness of various oilseeds prompts examination of all products. However, the soybean (with its products) has emerged as and should continue to be the most competitive oilseed.

Acreage commitments to plant soybeans in the United States, Brazil, Argentina, Paraguay, and Mainland China will continue to expand. If Argentina pursues plans to clear away the fertile land in the Pampas for soybean production, it will become the world's leading soybean producer in ten years. Increased soybean production versus other oilseeds will enhance the competitive price advantage of soybeans. Furthermore, on a worldwide basis, there will be an increasing trend to double-crop soybeans with wheat. The principal motivating factor in augmenting soybean production is to process soybean meal to optimize its versatility as a high protein feed, particularly for hogs and poultry. Soybean meal will be used on a worldwide basis as a greater percentage of total oilseed meals use in both developed and developing countries. The American Soybean Association, with various overseas offices, has successfully demonstrated the viability of soybean meal in the livestock sector, particularly in developing countries.

The price outlook for soybean meal for the latter part of the U.S. crop years 1981/82 and 1982/83 should improve from the depressed levels which prevailed in the spring of 1982, for the following reasons: (1) the shortfall in the Brazilian soybean crop size to some 13.0 million metric tons will enhance U.S. exports of soybean meal commencing in September 1982; (2) the third quarter of 1982 should mark the beginning of the U.S. economic recovery, in conjunction with that of Western Europe, and the concomitant result will be greater use of soybean meal versus other meals and grain substitutes such as corngluten; (3) the U.S. hog cycle should begin to trend upwards in December 1982; (4) lower U.S. interest rates will strengthen foreign currencies against the U.S. dollar, prompting larger imports of U.S. soybean meal by Europe and Japan, in terms of their respective currencies. The unusual anomalies which depressed worldwide demand during the crop year 1980/81 and continuing into 1981/82 should be alleviated by the third quarter of 1982. The abovementioned factors should permit U.S. domestic consumption and exports of soybean meal to continue the strong growth trend of the 1970's.

TRADING ACTIVITY ON THE COMMODITY FUTURES MARKETS


U. S. FUTURES MARKETS TRADING

Total Annual Volume

Volume Highlights 1981 in Comparison with 1980

Rank	EXCHANGE	1981 Contracts	%	1980 Contracts	%	Rank
1.	Chicago Board of Trade	49,085,763	49.82	45,281,571	49.18	(1)
2.	Chicago Mercantile Exchange	24,527,020	24.89	22,261,295	24.17	(2)
3.	Commodity Exchange, Inc.	13,293,049	13.49	11,009,389	11.95	(3)
4.	Coffee, Sugar & Cocoa Exchange	3,562,613	3.62	4,886,416	5.31	(4)
5.	MidAmerica Commodity Exchange	2,588,540	2.63	2,993,636	3.25	(5)
6.	New York Cotton Exchange	1,802,891	1.83	2,653,294	2.88	(6)
7.	New York Mercantile Exchange	1,781,407	1.81	1,154,905	1.25	(8)
8.	Kansas City Board of Trade	1,181,884	1.20	1,298,047	1.41	(7)
9.	Minneapolis Grain Exchange	372,624	.38	360,978	.39	(9)
10.	New York Futures Exchange	290,585	.29	183,993	.20	(10)
11.	New Orleans Commodity Exchange	35,995	.04	—	—	—
12.	AMEX Commodity Exchange	—	—	12,585	.01	—
		98,522,371	100.00	92,096,109	100.00	

Source: Futures Industry Association

Commodity Futures Contracts Traded 1977–1981

	Contract Unit	1981	1980	1979	1978	1977
Wheat	5,000 bu	4,511,934	5,428,160	3,575,395	2,556,134	1,820,790
Corn	5,000 bu	10,674,986	11,946,975	8,671,719	6,127,099	5,021,827
Oats	5,000 bu	370,103	320,934	215,928	215,774	109,970
Soybeans	5,000 bu	10,489,932	11,768,197	9,114,348	8,477,277	7,996,139
Soybean Oil	60,000 lb	3,047,490	3,167,895	3,081,646	2,909,284	2,535,046
Soybean Meal	100 tons	3,039,633	3,218,690	2,647,821	2,493,086	2,373,453
Iced Broilers	30,000 lb	—	4,079	25,681	74,684	64,938
Silver	5,000 oz	214,236	341,033	2,720,589	2,657,833	2,257,059
Silver	1,000 oz	184,776	—	—	—	—
Gold	3 Kg	—	78	12,844	56,470	13,758
Gold	100 oz	14,749	71,401	97,509	—	—
Plywood	76,032 sq. ft.	144,318	169,550	146,570	261,483	368,770
Western Plywood	76,032 sq. ft.	30,871	—	—	—	—
GNMA Mrtges, CD	$100,000	175	12,619	77,365	6,527	—
GNMA Mrtges, CDR	$100,000	2,292,882	2,325,892	1,371,078	953,161	422,421
Com. Paper (90-day)	$1,000,000	49	15,996	39,702	18,767	3,553
Com. Paper (30-day)	$3,000,000	—	67	1,292	—	—
T-Notes (4–6 year)	$100,000	2,721	450	11,599	—	—
T-Bonds	$100,000	13,907,988	6,489,555	2,059,594	555,350	32,101
Domestic CD (90-day)	$1,000,000	158,920	—	—	—	—
Chicago Board of Trade		49,085,763	45,281,571	33,870,680	27,362,929	23,019,825
Fresh Eggs	22,500 dz	13	2,798	21,224	72,984	130,042
Potatoes	80,000 lb	973	2,481	1,126	90	4,727
Live Hogs	30,000 lb	2,258,083	2,153,767	1,805,710	1,765,201	1,307,712
Pork Bellies, Fzn.	38,000 lb	1,997,697	2,250,945	1,514,176	1,439,651	1,358,730
Live Cattle	40,000 lb	4,282,293	5,997,047	7,214,848	5,592,364	2,639,517
Feeder Cattle	42,000 lb	620,885	874,313	980,619	568,728	133,274
Turkeys	36,000 lb	—	—	—	—	144
Boneless Beef	30,000 lb	—	—	—	—	41
Broilers	30,000 lb	20,048	45,237	7,794	—	—
Lumber	130,000 bd. ft.	635,934	838,676	649,478	560,498	486,691
Stud Lumber	100,000 bd. ft.	156	2,198	5,059	9,365	687
Plywood	152,064 sq. ft.	386	—	—	—	—
British Pound	25,000	1,491,102	1,263,750	513,682	240,099	78,701
Canadian Dollar	100,000	475,585	601,925	399,885	207,654	161,139
Deutsche Mark	125,000	1,654,891	922,608	450,856	400,569	134,368
Japanese Yen	12,500,000	960,598	575,073	329,645	361,731	82,261
Mexican Peso	1,000,000	18,905	19,301	29,982	17,844	17,029
Swiss Franc	125,000	1,518,767	827,884	493,944	321,451	106,968
Dutch Guilder	125,000	4	4	22	3,585	2,812
U.S. Silver Coins	$5,000	6	10	59	275	371
French Franc	250,000	2,080	144	406	4,449	3,150
Gold	100 oz	2,518,435	2,543,419	3,558,960	2,812,870	908,180
T-Bills (90 day)	$1,000,000	5,631,290	3,338,773	1,930,482	768,980	321,703
T-Bills (1-year)	$250,000	—	604	11,769	5,564	—
T-Notes (4–6 year)	$250,000	—	338	11,072	—	—
Domestic CD (90-day)	$1,000,000	423,718	—	—	—	—
Eurodollar	$1,000,000	15,171	—	—	—	—
Chicago Merc. Exch.		24,527,020	22,261,295	19,930,798	15,153,952	7,878,247
Wheat	5,000 bu	1,181,884	1,297,757	1,037,018	755,949	617,122
Grain Sorghum	5,000 bu	—	290	—	—	15
Kansas City Bd. of Tr.		1,181,884	1,298,047	1,037,018	755,949	617,137
Wheat	5,000 bu	357,779	333,610	328,799	284,313	191,098
Durum Wheat	5,000 bu	—	—	—	—	—
Sunflower Seeds	100,000 lb	14,845	27,368	—	—	—
Minneapolis Grain Exch.		372,624	360,978	328,,799	284,313	191,134
Wheat	1,000 bu	279,082	550,950	379,975	205,629	151,433
Corn	1,000 bu	513,953	440,615	323,808	256,022	280,268
Oats	5,000 bu	4,176	2,364	1,961	1,423	1,172
Soybeans	1,000 bu	849,169	1,052,707	964,596	994,932	1,104,763
Silver	1,000 oz	143,051	209,494	361,576	378,049	366,585
Gold	1 Kg	—	—	4	3,214	2,650
Gold	33.2 oz	469,460	447,494	200,359	41,939	—

	Contract Unit	1981	1980	1979	1978	1977
Live Cattle	20,000 lb	119,566	186,831	208,997	54,054	—
Live Hogs	15,000 lb	100,139	103,181	127,674	185,927	159,324
T-Bonds	$50,000	109,944	—	—	—	—
MidAmerica Com. Exch.		2,588,540	2,993,636	2,568,950	2,121,189	2,066,195
Coffee "C"	37,500 lb	515,302	906,944	449,799	163,959	214,202
Sugar #11	112,000 lb	2,470,327	3,576,662	1,792,723	1,016,773	1,055,984
Sugar #12	112,000 lb	14,333	13,839	35,474	21,875	15,676
Cocoa	30,000 lb	—	187,309	231,918	222,732	307,628
Cocoa	10 M tons	562,651	201,662	265	—	—
Rubber	33,000 lb	—	—	—	—	53
Coffee Sugar & Cocoa Exch.		3,562,613	4,886,416	2,510,179	1,425,339	1,593,543
Copper	25,000 lb	1,647,380	1,848,080	2,301,033	1,408,688	1,070,210
Zinc	60,000 lb	3	28	75	677	—
Silver	5,000 oz	1,240,720	1,058,734	4,080,619	3,822,085	3,540,047
Gold	100 oz	10,373,706	8,001,410	6,541,893	3,742,378	981,551
T-Bills (90-day)	$1,000,000	1,052	76,081	27,860	—	—
T-Notes (2-year)	$100,000	30,188	17,653	—	—	—
GNMA Mrtges, CD	$100,000	—	7,403	873	—	—
Commodity Exchange, Inc. (N.Y.)		13,293,049	11,009,389	12,952,353	8,973,828	5,591,808
Cotton #2	50,000 lb	1,415,213	2,490,405	1,689,051	1,155,801	826,395
Orange Jce, Fzn Con	15,000 lb	387,182	162,864	186,018	285,405	377,921
Propane	100,000 gl	496	25	57	3	301
Wool	5,000 lb	—	—	—	—	3
NY Cotton, Cit. & Pet. Exch.		1,802,891	2,653,294	1,875,126	1,441,209	1,204,620
T-Bills (90-day)	$1,000,000	9,766	32,452	—	—	—
T-Bonds	$100,000	162,942	139,410	—	—	—
Domestic CD (90-day)	$1,000,000	117,807	—	—	—	—
British Pound	25,000	37	7,352	—	—	—
Canadian Dollar	100,000	4	692	—	—	—
Deutsche Mark	125,000	3	258	—	—	—
Japanese Yen	12,500,000	13	199	—	—	—
Swiss Franc	125,000	13	3,630	—	—	—
NY Futures Exchange		290,585	183,993	—	—	—
Palladium	100 oz	40,822	62,217	46,994	45,174	19,971
Platinum	50 oz	490,493	429,708	536,124	405,748	122,924
U.S. Silver Coins	$10,000	41	6,808	5,462	9,887	15,514
Gold	1 Kg	—	10	171	620	1,017
Gold	400 oz	—	—	533	2,748	2,633
British Pound	25,000	—	—	420	500	—
Canadian Dollar	100,000	—	—	3,866	181	—
Deutsche Mark	125,000	—	—	182	1,844	—
Japanese Yen	12,500,000	—	—	43	441	—
Swiss Franc	125,000	—	—	45	401	—
Imported Lean Beef	36,000 lb	7,796	24,119	16,704	5,890	2,690
Potatoes, Maine	50,000 lb	—	—	—	—	41,248
Potatoes	50,000 lb	237,411	393,759	183,868	453,215	478,558
No. 2 Heating Oil, NY	1,000 brl	995,506	238,284	33,804	116	—
No. 2 Heating Oil, Gulf	1,000 brl	1,856	—	—	—	—
Leaded Reg. Gasoline, NY	1,000 brl	7,300	—	—	—	—
No. 6 Ind'l Fuel Oil	1,000 brl	—	—	33	28	—
Leaded Reg. Gasoline, Gulf	1,000 brl	2	—	—	—	—
NY Mercantile Exchange		1,781,407	1,154,905	828,249	926,793	684,555
Rice, Milled	120,000 lb	10,249	—	—	—	—
Rice, Rough	200,000 lb	11,478	—	—	—	—
Cotton	50,000 lb	9,271	—	—	—	—
Soybeans	5,000 bu	4,997	—	—	—	—
New Orleans Com. Exch.		35,995	—	—	—	—
GNMA Mrtges, CD	$100,000	—	4,530	52,493	16,671	—
T-Bills (90-day)	$1,000,000	—	5	4,334	—	—
T-Bonds	$100,000	—	8,050	7,492	—	—
Amex Commodity Exch.		—	12,585	64,319	16,671	—
Total All Contracts		98,522,371	92,096,109	75,966,471	58,462,172	42,847,064
CHANGE FROM PREVIOUS YEAR		+7%	+21.2%	+29.9%	+36.3%	+16.3%

Source: Futures Industry Association, Inc.

Alcohol

Salient Statistics of Alcohol in the United States In Millions of Gallons[3]

Fiscal Year Beginning Sept.[6]	Ethyl Alcohol								Denatured Alcohol[2]				Prod. of Refined Methanol[4] (Synthetic & Natural)
		Withdrawals							Completely	Specially			
			Tax-Free										
	Production[5]	Tax-Paid[5] 190° & Over	For Denaturation	For Use of U.S.	Other[1]	Total	Total Withdrawn	Stocks at End of Fiscal Year	Production	Production	Withdrawals	Stocks Aug. 30[6]	
1969–0	691.8	62.9	543.0	.8	18.4	562.2	625.1	184.0	2.1	289.4	288.6	2.9	633.4
1970–1	570.0	63.3	470.6	.6	12.9	484.1	547.4	150.1	2.3	252.6	253.5	2.3	742.7
1971–2	569.0	68.0	435.4	.8	45.4	481.5	549.5	100.0	2.1	234.5	234.1	2.8	745.5
1972–3	679.7	67.8	460.9	.9	115.9	577.6	645.4	89.6	2.3	246.7	247.2	2.8	974.6
1973–4	647.4	72.4	469.7	.6	88.1	563.3	635.7	82.2	2.2	256.7	257.2	2.3	1,064
1974–5	581.0	72.7	403.3	.3	36.4	440.0	512.7	116.7	1.3	219.3	220.1	2.0	1,036
1975–6	503.4	78.5	419.3	.5	13.7	433.5	512.0	93.1	1.1	221.1	220.5	2.7	779.6
1976–7[6]	494.9	78.7	416.2	.4	14.6	431.2	509.9	79.0	1.1	223.8	224.1	2.7	940.1
1977–8	521.3	85.2	393.7	.4	15.1	409.2	494.4	76.2	1.1	221.9	222.3	2.6	971.8
1978–9								61.5				4.1	970.4
1979–0								76.2	1.1	221.9	222.3	2.6	971.8
1980–1								75.4				3.5	1,077
1981–2													1,266

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[1] Represents withdrawals for hospital, scientific and educational use, for exports, etc. [2] At denaturing plants. [3] Ethyl alcohol in proof gallons; denatured alcohol in wine gallons. [4] On a CALENDAR YEAR basis. [5] Represents alcohol and spirits of 190° of proof and over. [6] THE FISCAL YEAR PRIOR TO 1976–7 was from JULY–JUNE. *Source: Alcohol and Tobacco Division*

Average Wholesale Price Index of Ethyl Alcohol, in N.Y. Dec. 1973 = 100[1]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1969	54.5	54.5	54.5	54.5	56.5	56.5	56.5	56.5	56.5	56.5	56.5	56.5	55.8
1970	56.5	56.5	56.5	56.5	56.5	56.5	56.5	56.5	56.5	56.5	56.5	56.5	56.5
1971	56.5	56.5	56.5	56.5	56.5	56.5	56.5	56.5	56.5	55.0	55.0	55.0	56.1
1972	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0
1973	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0
1974[1]	113.1	115.4	123.6	129.9	133.0	148.9	152.5	154.2	167.5	180.9	189.4	193.9	150.2
1975	201.6	206.3	219.2	219.2	217.8	218.0	216.8	214.6	215.8	217.1	218.2	216.6	215.1
1976	217.2	230.2	233.0	233.6	233.0	233.0	233.0	232.5	233.0	233.0	232.3	233.0	231.4
1977	231.6	233.0	232.3	232.3	232.3	233.0	238.8	244.9	243.6	243.1	242.5	243.9	237.6
1978	243.9	231.0	230.3	226.4	226.4	225.8	226.4	226.6	226.4	218.8	226.4	226.5	227.9
1979	234.8	239.2	239.2	243.6	248.1	249.4	260.1	265.4	277.6	284.3	291.5	292.2	260.5
1980	311.7	325.0	325.0	338.4	361.4	369.4	370.3	369.2	369.2	369.3	369.2	369.2	353.9
1981	369.2	N.A.	368.5	370.3	368.5	368.5	387.3	387.3	387.3	396.8	392.0	390.0	380.5
1982	382.2	353.5											

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[1] Data prior to 1974 are for specially denatured No. 1, 190 proof, tank carlots, f.o.b. eastern works; freight prepared in CENTS PER GALLON. *Source: Bureau of Labor Statistics* (0614-0341.04)

U.S. Production of Ethyl Alcohol[1] & Spirits In Millions of Tax Gallons[2]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1969	67.5	64.4	65.3	56.4	59.3	58.1	61.9	62.8	62.2	75.9	50.5	53.2	737.7
1970	42.2	48.5	59.8	57.7	57.8	59.2	56.9	46.9	58.3	54.8	41.4	48.3	631.5
1971	45.0	41.5	41.7	44.4	43.4	48.6	43.7	43.6	46.9	56.4	51.6	46.9	552.9
1972	38.0	43.8	46.1	43.7	52.4	56.7	64.7	57.7	64.0	59.3	51.5	53.4	621.3
1973	57.1	52.5	57.1	58.4	58.1	55.9	54.2	57.4	59.9	62.7	62.2	56.4	692.1
1974	49.9	49.9	45.3	55.5	52.8	40.8	45.3	52.4	59.5	61.0	48.6	54.8	618.2
1975	52.0	40.4	44.5	41.4	39.8	39.1	41.3	40.1	39.6	53.8	46.4	48.0	526.4
1976	41.6	36.2	44.0	39.3	36.0	37.0	45.5	46.0	43.3	39.3	42.8	47.7	498.8
1977	36.5	37.7	42.8	39.2	43.5	43.2	40.3	40.9	41.0	44.7	48.9	39.7	498.3
1978	35.8	41.1	50.4	42.2	31.3	48.7	42.5	45.4	50.5	40.3	38.0	40.7	506.9
1979	42.8	41.3	49.3	47.3	42.9	48.2	43.8	46.0	53.7	49.4	51.0	54.6	570.4
1980	57.4	52.7	54.7	54.6	54.0	45.7	52.8	46.4	57.2	64.3	47.7	53.7	642.8
1981[3]	49.2	44.3	49.3	50.9	44.0	42.2	45.3	55.8	53.1				
1982													

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[1] At industrial alcohol plants. [2] A "tax gallon" is the alcoholic equivalent of a U.S. gallon at 60 degrees Fahrenheit, containing 50% of ethyl alcohol by volume. [3] Preliminary. *Source: Internal Revenue Service*

Aluminum

According to the International Primary Aluminum Institute, as reported in the *American Metal Market*, world primary aluminum production in 1981 totaled about 12.9 million tonnes, 2.5 percent below 1980 output, but 4.2 percent above production in 1979.

U.S. primary aluminum production in 1981 was 3.6 percent below 1980 output as weakening markets forced cutbacks in production from June throughout the remainder of the year, according to preliminary data of the U.S. Bureau of Mines. The total of new and old scrap recovery was 1.5 percent above the 1980 level, partly reflecting the greater recycling of cans. The domestic industry's primary aluminum production rate began 1981 at 94 percent of capacity with about 354,000 short tons of annual capacity shut down, and ended the year at 76 percent of capacity with 1,300,000 tons shut down. The production rate was cut further in January 1982, to about 71 percent because of continuing adverse business conditions, particularly in the housing and transportation industries.

The U.S. became a net importer of aluminum once again in 1981. Imports of metals and alloys increased 22.4 percent over the 1980 level. Imports of plates, sheets, bars, etc. increased 96 percent, and imports of scrap rose 37 percent from 1980 levels.

U.S. exports of ingot, slab, and crude aluminum in 1981 were 52 percent below 1980 exports. Exports of plates, sheets, bars, etc. were off 14 percent in 1981. Scrap ingot exports were 17 percent lower than in 1980, and exports of other scrap were off 51 percent from the 1980 level. The strong U.S. dollar and recessionary developments abroad were important factors contributing to the sharp reduction in 1981 aluminum exports.

According to the National Association of Recycling Industries, domestic aluminum scrap consumption in 1981 was 18.3 percent above the 1980 level. In addition, the percentage of aluminum scrap metal consumed in relation to the total secondary and primary domestic consumption of aluminum reached a record-high 28.7 percent, compared with 24.7 percent in 1980. Packaging accounted for an estimated 30 percent of domestic consumption in 1981, building—21 percent, transportation—18 percent, electrical—10 percent, consumer durables—8 percent, and other uses—13 percent.

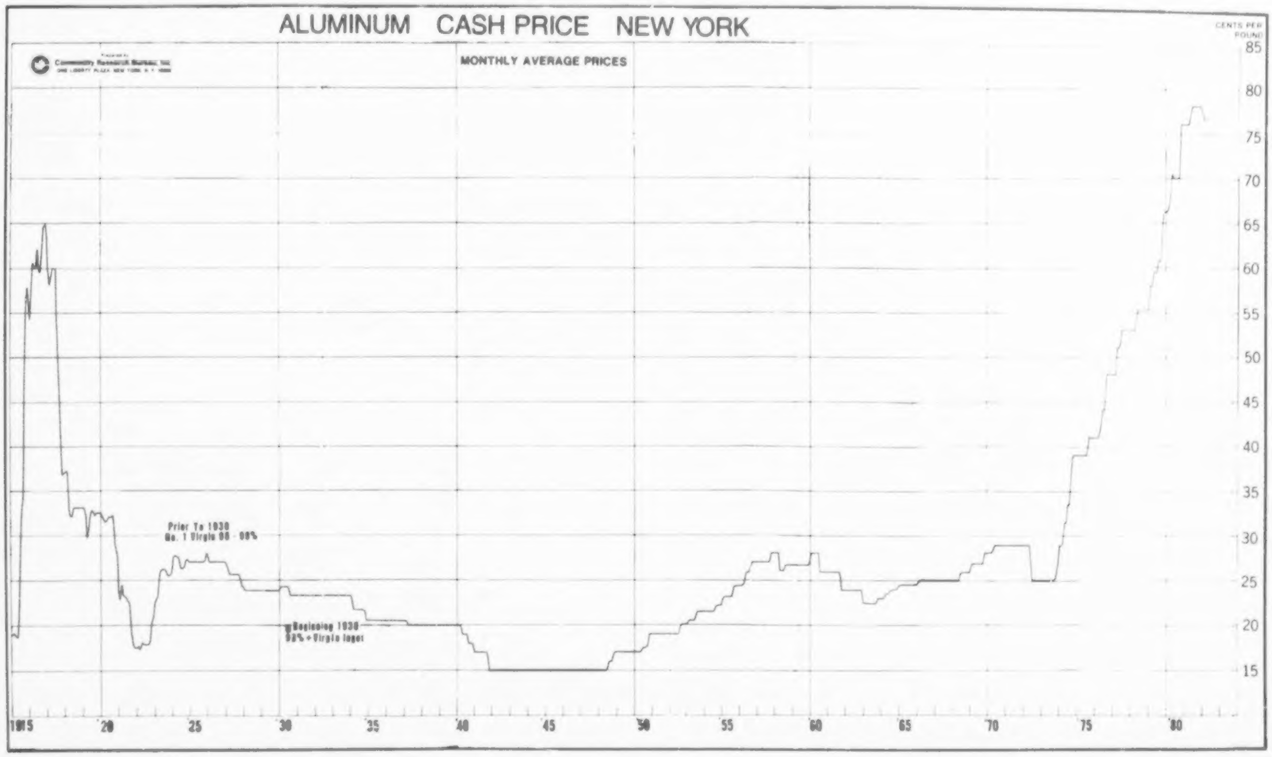
U.S. aluminum industry stocks at the end of 1981 were about 28 percent larger than a year earlier, according to preliminary U.S. Bureau of Mines data. Aluminum customers kept their inventories at low levels in 1981, but producers' inventories increased sharply.

The price of primary aluminum, as quoted by most U.S. producers, held unchanged at 76 cents per pound throughout much of 1981. However, discounting was reported to have begun on primary ingot and mill products as early as the first half of the year. By early 1982, spot market prices for primary ingot had dropped to as low as 52 to 54 cents per pound.

About one-third of all U.S. primary aluminum production capacity is located in the Pacific Northwest. By contracts negotiated in late 1981 with the Bonneville Power Administration (BPA), the aluminum companies in the Pacific Northwest are assured power for a period of 20 years, although at a considerably higher cost than formerly.

Futures Market

Aluminum futures are traded on the London Metal Exchange (LME).



ALUMINUM

World Production of Aluminum In Thousands of Short Tons

Year	Australia	Austria	Canada	China	France	W. Germany	Hungary	Italy	Japan	Norway	Spain	Switzerland	Cameroon	Un. Kingdom	United States	USSR	World Total
1971	247	100	1,121		423	471	74	132	984	584	139	104	56	131	3,925	1,300	11,373
1972	227	93	1,013		434	490	75	134	1,118	604	154	92	51	189	4,122	1,380	12,115
1973	228	98	1,038		396	587	75	203	1,209	684	179	94	49	277	4,529	1,500	13,364
1974	242	101	1,125	165	434	759	76	238	1,232	731	211	96	52	323	4,903	1,580	14,516
1975	236	98	978	220	422	747	77	210	1,117	656	232	87	57	340	3,879	1,690	13,387
1976	256	98	698	350	424	768	78	228	1,013	681	232	86	64	369	4,251	1,760	13,913
1977	273	101	1,073	385	441	818	79	287	1,310	686	233	88	61	386	4,539	1,810	15,197
1978	290	101	1,156	400	431	816	79	298	1,166	704	234	88	54	382	4,804	1,840	15,562
1979	297	102	948	400	435	818	79	297	1,114	727	286	91	48	396	5,023	1,930	16,053
1980[1]	335	104	1,177	400	476	806	81	299	1,203	718	426	95	44	413	5,130	1,970	16,940
1981[2]			1,230		470	800			900	710				400	4,950	2,100	17,000

[1] Preliminary. [2] Estimate. *Source: Bureau of Mines*

U.S. Aluminum Inventories, Total (Ingot, Mill Prod. & Scrap) In Million Pounds

Year	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1971	4,387	4,467	4,493	4,475	4,441	4,271	4,463	4,669	4,743	4,771	4,878	4,990
1972	5,026	5,050	5,038	5,003	4,984	4,919	4,869	4,924	4,896	4,868	4,866	4,856
1973	4,861	4,840	4,764	4,697	4,623	4,559	4,609	4,576	4,545	4,504	4,422	4,375
1974	4,366	4,276	4,250	4,182	4,233	4,291	4,329	4,428	4,533	4,559	4,650	4,869
1975	5,156	5,535	5,589	5,866	5,940	6,092	6,086	6,070	6,013	6,014	5,962	6,007
1976	5,999	6,011	6,036	5,899	5,823	5,685	5,554	5,605	5,545	5,541	5,613	5,720
1977	5,701	5,854	5,893	5,666	5,597	5,553	5,470	5,620	5,662	5,628	5,707	5,742
1978	5,706	5,809	5,799	5,730	5,749	5,695	5,664	5,704	5,586	5,610	5,575	5,548
1979[1]	5,494	5,395	5,242	5,009	5,017	4,950	4,893	4,921	4,915	4,941	4,940	5,000
1980[1]	5,112	5,069	5,011	4,949	4,910	4,950	5,021	5,072	5,026	4,966	4,942	5,082
1981[1]	5,076	5,221	5,323	5,408	5,495	5,600	5,632	5,964	6,086	6,187	6,276	6,515

[1] Preliminary. *Source: Bureau of Mines*

Aluminum Imports (General)—Metal & Alloys, Crude—into the U.S. In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1972	46.8	43.9	70.0	55.0	73.4	66.3	44.8	39.2	52.2	47.0	53.3	54.5	646.4
1973	58.2	38.8	50.9	43.1	44.7	50.7	34.6	36.0	33.0	46.0	35.1	36.5	507.6
1974	30.5	34.7	48.6	41.1	44.1	38.2	36.6	51.0	41.5	53.1	47.4	42.3	509.0
1975	41.9	37.4	30.7	31.5	25.5	34.9	26.7	43.5	56.4	37.8	45.3	46.3	434.1
1976	36.1	47.0	50.7	71.7	68.8	70.9	33.2	68.6	27.9	34.2	33.6	25.9	575.4
1977	15.8	48.5	68.6	59.3	59.8	74.1	67.5	75.9	42.2	49.6	54.5	57.5	670.2
1978	53.0	64.0	74.4	58.2	89.9	83.5	66.9	50.8	51.3	86.9	43.1	35.0	756.9
1979	69.6	41.0	53.9	44.3	57.8	36.0	62.6	30.8	31.9	39.4	40.8	62.6	570.6
1980	61.8	45.3	47.8	45.4	42.1	51.7	40.3	40.7	43.0	41.4	29.9	78.3	580.5
1981	55.8	55.7	75.6	50.2	67.8	55.9	63.9	67.0	60.5	55.2	41.5	49.3	698.5
1982	38.5												

Source: Bureau of the Census

Aluminum Exports (Metal & Alloys, Crude) from the U.S. In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1973	12.4	11.5	10.6	12.4	11.1	10.3	14.1	16.4	29.8	31.2	47.0	22.8	229.6
1974	22.0	20.9	30.4	22.8	17.7	13.6	15.0	14.4	12.3	16.7	9.2	12.8	207.8
1975	4.8	4.9	3.6	4.5	13.4	8.6	4.8	20.9	13.7	25.2	36.8	44.9	185.8
1976	31.3	4.1	25.8	14.6	7.2	9.7	10.5	9.8	6.2	7.5	13.1	12.7	152.4
1977	9.8	10.6	8.7	12.5	4.4	6.7	7.9	9.3	9.0	2.9	8.9	7.2	97.8
1978	3.7	5.7	6.1	4.2	7.0	9.3	8.5	11.0	15.9	17.7	23.1	14.3	126.6
1979	32.4	15.4	14.8	19.4	12.0	7.7	8.3	12.2	8.4	19.2	17.2	33.6	200.6
1980	39.6	37.7	52.8	52.3	52.3	61.3	51.3	97.6	98.9	70.1	55.0	46.1	715.0
1981	59.4	23.2	32.9	48.6	29.3	23.5	29.3	16.8	9.2	24.1	23.1	24.6	344.2
1982	22.1												

Source: Bureau of the Census

Salient Statistics of Aluminum in the U.S. In Thousands of Short Tons

Year	Net Import Reliance as a % of Apparent Consumption	Production		Primary Sold[1]	Recovery from Scrap		Total Apparent Consumption	Net Shipments[5] by Producers								
								Wrought Products				Castings				Total All Net Shipments
		Primary	Secondary		Old	New		Plate Sheet Foil	Rolled Structural Shapes[2]	Extruded Shapes[3]	All	Permanent Mold	Die	Sand	All	
1975	[7]	3,879	980	4,806	337	899	3,907	2,332	462	821	3,713	144	433	99	688	4,401
1976	9	4,251	1,155	6,145	409	1,062	5,083	3,178	493	1,071	4,858	189	605	110	923	5,780
1977	7	4,539	1,271	6,566	531	1,074	5,492	3,423	467	1,198	5,210	220	652	113	1,004	6,214
1978	11	4,804	1,323	7,143	575	1,098	6,045	3,643	583	1,311	5,673	229	666	126	1,044	6,717
1979	4	5,023	1,401	7,051	614	1,163	5,888	3,603	618	1,263	5,620	241	635	143	1,040	6,661
1980[4]	[7]	5,130	1,389	6,130	680	1,058	5,072	3,344	607	1,152	5,227	196	471	126	808	6,035
1981[6]	—	4,948			676	1,089	5,150									

[1] Or used by producers. Includes shipments to the Gov't. [2] Also rod, bar & wire. [3] Also rod, bar, tube, blooms & tubing. [4] Preliminary. [5] Consists of total shipments less shipments to other mills for further fabrication. [6] Estimate. [7] Net exports.
Source: Bureau of Mines

U.S. Production of Primary Aluminum (Domestic & Foreign Ores) In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total[1]
1975	394	324	347	326	327	302	310	309	300	311	310	319	3,879
1976	322	303	326	325	350	345	365	371	366	391	387	400	4,251
1977	399	352	379	371	383	369	376	376	367	386	380	395	4,539
1978	400	367	395	387	405	395	408	410	399	416	404	418	4,804
1979[2]	418	379	419	402	423	410	428	430	419	435	423	435	5,023
1980[2]	431	406	434	421	438	425	427	426	419	437	427	439	5,130
1981[2]	445	404	448	431	441	420	426	416	393	396	364	364	4,948

[1] Final annual totals. [2] Preliminary. *Source: Bureau of Mines*

Aluminum Products (Ingot & Mill Products) Shipments[1] in the U.S. In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1975	769.9	735.5	675.8	736.6	747.9	832.4	825.4	866.6	899.9	921.4	824.6	968.4	9,804
1976	902.5	945.7	1,135	1,059	1,203	1,169	942.1	1,173	1,007	1,016	960.9	1,056	12,247
1977	847.2	946.8	1,417	1,161	1,142	1,189	942.8	1,046	1,023	1,019	972.5	1,102	12,831
1978	932.7	1,024	1,277	1,079	1,223	1,257	1,114	1,187	1,175	1,342	1,183	1,207	13,982
1979[2]	1,270	1,147	1,374	1,141	1,264	1,201	1,137	1,186	1,084	1,192	1,098	1,130	14,517
1980[2]	1,255	1,218	1,274	1,180	1,135	1,093	1,104	1,177	1,184	1,232	1,021	1,203	14,057
1981[2]	1,090	1,072	1,294	1,199	1,189	1,248	1,039	1,119	1,082	1,060	857		

[1] Mill products & pig & ingot (net shipments). [2] Preliminary. *Source: Bureau of the Census*

Average Price of Aluminum (Virgin 99.5% Unalloyed Ingot) at N.Y. In Cents per Pound, Carload Lots

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1977	48.00	48.00	48.74	51.00	51.00	51.36	52.90	53.00	53.00	53.00	53.00	53.00	51.33
1978	53.00	53.00	53.00	53.00	54.23	55.25	55.25	55.25	55.25	55.25	55.25	55.50	54.44
1979	56.64	58.00	58.00	59.50	59.50	59.50	60.75	60.75	61.18	65.82	66.25	66.25	61.01
1980	66.25	66.86	68.40	70.52	70.00	70.00	70.00	70.00	70.00	75.65	76.00	76.00	70.81
1981	76.00	76.00	76.00	76.00	76.90	78.00	78.00	78.00	78.00	78.00	78.00	77.32	77.19
1982	76.50	76.50	76.50	76.50									

Source: American Metal Market

Average Price of Cast Aluminum Scrap (Crank Cases)[1] in New York In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1977	13.50	15.65	18.00	18.00	17.86	16.59	17.50	17.37	15.50	15.00	15.45	16.00	16.37
1978	16.71	18.50	19.11	22.10	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.75	21.39
1979	23.64	25.34	28.05	32.08	35.55	35.65	33.65	30.90	29.55	31.59	31.50	31.50	30.75
1980	34.36	37.90	43.85	37.47	30.52	27.00	28.18	30.52	31.00	31.00	30.08	27.50	32.45
1981	27.50	27.50	27.50	27.41	25.20	23.50	23.50	23.50	22.83	21.77	20.50	20.50	24.27
1982	20.50	20.50	19.85	19.50									

[1] Dealers' buying prices. *Source: American Metal Market*

Antimony

U.S. industrial consumption of primary antimony in 1981 was 8 percent lower than in 1980, according to preliminary data of the U.S. Bureau of Mines. The use of primary antimony in metal products dropped about 42 percent from the year-earlier level, paced by a sharp reduction in antimonial lead use. The use of antimony in ammunition increased about 13 percent. Consumption of primary antimony in nonmetal products in 1981 dropped about 50 percent from the 1980 level, with the most significant reductions occurring in plastics, ceramics and glass. The use of primary antimony in flame retardants declined about 25 percent in 1981, primarily in plastics.

Approximately 47 percent of the apparent 1981 domestic consumption of antimony was derived from old scrap. Recovery of antimony from battery-plate scrap comprised about 85 percent of the total secondary output. The balance was recovered from type metal scrap, bearing metals scrap, and miscellaneous antimony alloy scrap.

Overall, in 1981 the principal uses of primary antimony were estimated by the Bureau of Mines to be: flame retardants—55 percent; transportation, including batteries—15 percent; ceramics and glass—15 percent; chemicals—5 percent; other uses 10 percent.

World production of antimony in 1981 was estimated by the U.S. Bureau of Mines to be about 5 percent lower than in 1980. However, U.S. production of primary antimony increased in 1981 with the opening of a new smelter and an increase in capacity by another producer. Yet, reliance on imports of both metal and concentrates will continue as domestic producers supply less than 10 percent of the primary demand. (Net import reliance as a percent of apparent consumption—which is derived from both primary and secondary sources—was estimated at 51 percent in 1981.)

Total U.S. imports of antimony in all forms in 1981 were at about the same level as in 1980. Ore and concentrate imports, primarily from Bolivia and Mexico, decreased slightly, according to preliminary data released by the Bureau of Mines. Metal imports, mostly from Bolivia, increased slightly. Oxide imports, which accounted for about 56 percent of total imports, were about the same as in 1980. Major suppliers of antimony oxide to the U.S. in 1981 were the Republic of South Africa, Bolivia, China, and France.

U.S. industry stocks of primary antimony at the end of 1981 were estimated to be slightly lower than the revised 1980 total of 8,411 tons.

While the price of antimony in alloy remained at $2 per pound throughout 1981, the New York dealer price for antimony metal declined from about $1.47 per pound at the start of the year to $1.20 by the end of 1981.

World Production of Antimony (Content of Ore) In Short Tons

Year	Australia	Bolivia	Canada[2]	China[1]	Czechoslovakia	Italy	Morocco	Mexico[2]	Peru[5]	Turkey	South Africa	United States	U.S.S.R.	Yugoslavia[4]	World Total[1]
1970	66	12,970	363	13,000	660	1,432	2,008	4,925	1,286	3,053	19,147	1,130	7,400	3,197	77,124
1971	66	12,861	162	13,000	660	1,295	2,174	3,705	757	3,124	15,704	1,025	7,600	2,207	70,653
1972	66	14,703	340	13,000	660	1,324	917	3,280	826	2,982	16,062	489	7,700	2,177	73,986
1973	66	16,461	830	13,000	770	1,497	1,364	2,632	756	3,696	17,306	545	7,800	2,265	76,920
1974	1,550	14,396	1,380	13,000	830	1,297	2,029	2,653	751	6,482	16,722	661	8,000	2,434	79,232
1975	2,431	13,136	2,020	13,000	770	1,113	1,160	3,458	305	4,010	17,553	886	8,300	2,406	77,114
1976	2,086	18,756	2,535	9,300	314	1,112	1,549	2,806	665	1,890	11,890	283	8,500	2,228	71,388
1977	2,303	18,012	3,500	11,000	330	891	1,553	2,974	903	2,118	12,715	610	8,700	2,478	74,575
1978	1,674	14,702	3,310	11,000	330	1,026	2,437	2,708	821	2,610	10,024	798	8,700	2,950	69,409
1979[3]	1,717	14,351	3,255	11,000	330	1,045	2,175	3,166	841	2,080	12,844	722	9,000	2,245	71,933
1980[3]	1,720	17,047	2,360	11,000	330	1,050	2,200	3,200	850	2,000	14,410	343	9,000	1,700	74,065
1981[1]		17,000						3,200			12,000	700		2,000	71,800

[1] Estimate. [2] Includes antimony content of miscellaneous smelter products. [3] Preliminary. [4] Metal. [5] Recoverable.
Source: Bureau of Mines

Average Price of American Antimony R. M. M.[2] Brand (N.Y. Equivalent[1]—in Bulk) In Cents Per Pound

Year	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1971	98.00	98.00	82.48	81.00	70.55	70.00	60.57	59.00	59.00	59.00	59.00	59.00	71.30
1972	59.00	59.00	59.00	59.00	59.00	59.00	59.00	59.00	59.00	59.00	59.00	59.00	59.00
1973	59.00	60.26	62.00	65.14	68.00	68.00	68.00	68.00	68.00	68.00	77.00	90.00	68.45
1974	94.00	98.74	104.00	142.00	177.00	213.50	225.00	225.00	225.00	225.00	225.00	225.00	181.60
1975	213.18	199.00	199.00	199.00	188.71	160.00	160.00	160.00	160.00	160.00	160.00	160.00	176.57
1976	158.00	158.00	158.00	158.00	158.00	158.00	158.00	158.00	166.90	175.00	175.00	175.00	162.99
1977	175.00	175.00	175.00	175.00	175.00	175.00	175.00	175.00	175.00	175.00	175.00	175.00	175.00
1978	175.00	175.00	175.00	175.00	175.00	175.00	175.00	175.00	175.00	175.00	175.00	175.00	175.00
1979[2]	177.00	177.00	190.00	201.00	201.00	201.00	201.00	201.00	201.00	201.00	201.00	201.00	196.08
1980	201.00	201.00	201.00	201.00	201.00	201.00	201.00	201.00	201.00	201.00	201.00	200.00	200.92
1981	200.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00
1982	200.00	200.00	200.00	200.00									

[1] Of F.O.B. Laredo, Texas Base. [2] Domestic refined in alloy beginning Jan. 1979. *Source: American Metal Market*

Salient Statistics of Antimony in the United States In Short Tons

Year	Net Import Reliance as a % of Apparent Consumption	Production				Imports[5]				Industry Stocks, Dec. 31[3]					Prod. or Antimonial Lead[7]
		(Gross Weight) Ores	Primary[2] Mine	Primary[2] Smelter	Secondary (Alloys)[2]	Ore Gross Weight	Ore Sb Content	Metal Gross Weight	Exports[3]	Ores & Concentrates	Metallic	Oxide	Sulfide	Total[6]	
1969		5,707	938	13,203	23,840	24,158	12,098	980	207	2,227	1,273	2,053	108	6,339	2,082
1970		6,681	1,381	13,381	21,424	34,415	13,820	1,290	543	2,973	1,598	2,932	39	8,847	1,184
1971		4,721	1,025	11,374	20,917	22,102	9,619	1,638	1,023	3,582	1,367	2,697	22	8,637	1,191
1972		2,072	489	13,344	22,428	33,542	17,212	2,302	121	3,562	1,332	3,179	182	8,622	1,050
1973		2,468	545	17,206	24,062	33,869	16,679	692	515	5,585	1,540	2,074	31	10,078	1,167
1974		3,217	661	16,657	23,570	31,330	14,655	2,203	871	6,275	809	3,732	35	11,694	1,097
1975	49	4,505	886	12,189	17,964	20,736	8,320	2,112	340	8,364	1,380	3,886	32	14,957	567
1976	54	1,111	283	14,618	19,799	20,945	10,023	2,083	341	7,899	1,662	4,560	31	15,070	730
1977	41	3,496	610	12,827	30,601	8,042	3,438	1,722	742	1,869	1,359	4,576	24	8,591	900
1978	43	4,231	798	14,110	26,456	8,672	4,495	4,127	556	1,610	1,119	4,906	19	8,201	783
1979[1]	53	3,294	722	15,062	24,155	15,745	7,732	3,022	485	1,757	1,184	3,398	17	7,144	299
1980[4]	48	3,041	343	16,062	19,893	11,044	5,235	2,590	453	2,743	680	3,855	13	8,411	30
1981[4]	51		589	17,769	17,000		5,166	2,633	326	2,529	816	4,785	29	8,277	

[1] Preliminary [2] Antimony content. [3] Antimony ore, metal & compounds. [4] Estimate. [5] Imports for consumption. [6] Including primary antimony residues & slag. *Source: Bureau of Mines*

Industrial Consumption of Primary Antimony in the United States In Short Tons (Antimony Content)

Year	Ammunition	Metal Products							Non-Metal Products								Grand Total
		Antimonial Lead	Sheet & Pipe	Bearing Metal & Bearings	Cable Covering	Solder	Type Metal	Total All Metal Products	Fireworks	Flame Retardant	Non Metal Ceramics & Glass	Non Metal Rubber Pdt's.	Non Metal Pigments	Non Metal Plastics	Total[3]		
1969		6,723	105	758	55		541	8,765	30	2,096	2,108	433	722	2,558	9,078		17,843
1970		5,246	77	481	38		220	6,574	17	1,774	1,820	519	610	1,667	7,363		13,937
1971		5,430	74	515	36		177	6,621	4	1,524	1,840	525	592	1,810	7,086		13,707
1972	64	6,149	108	559	19		142	7,382	4	2,280	1,695	587	644	2,391	8,742		16,124
1973	122	8,027	97	527	12		134	9,291	5	2,906	1,917	693	644	2,920	11,322		20,613
1974	121	7,251	69	476	16		107	8,429	11	4,383	1,384	664	460	1,431	5,229		18,041
1975	239	4,568	60	402	23	133	75	5,647	10	3,799	989	458	321	1,091	3,541		12,987
1976	63	3,861	74	405	19	188	79	4,900	12	5,552	1,260	578	415	1,277	4,885		15,337
1977	138	2,936	56	265	16	220	83	3,847	9	5,765	1,547	473	400	1,503	4,211		13,823
1978	133	2,832	39	279	21	206	81	3,736	5	5,854	1,259	254	410	1,456	3,562		13,152
1979	253	1,300	36	235	16	199	37	2,213	6	6,083	1,127	182	399	1,580	3,457		11,753
1980[1]	362	748	29	223	31	134	21	1,650	4	5,695	1,303	325	499	1,636	3,894		11,239
1981[2]	409	223	30	158	25	44	6	950	3	3,711	884	72	362	620	1,958		10,342

[1] Preliminary. [2] Estimate. [3] Excludes flame-retardant. *Source: Bureau of Mines*

Antimony Imported[3] into the U.S. & Price Ranges

Year	Imported for Consumption									Antimony Ore		
	Antimony Ore Value Ths. $	Needle or Liquidated Antimony Gross Weight Sh. Tons	Needle or Liquidated Antimony Value $ Ths.	Antimony Metal Short Tons	Antimony Metal Value $ Ths.	Antimony Oxide Short Tons	Antimony Oxide Value $ Ths.	Foreign Metal ¢[2] Lb.	Antim. Trioxide ¢[2] Lb.	50–55% $ Short Ton	Minimum 60% $ Short Ton	Minimum 65% $ Short Ton
1969	5,248	62	51	980	888	4,715	3,852	42½–300	47½–65½	5–5.40	7–25	
1970	12,733	18	54	1,290	3,493	4,256	10,023	80–400	97½–170		17–40	
1971	8,787	32	47	1,638	1,914	2,791	4,317	52–95	77–100		8.64–10	
1972	9,437	78	75	2,302	2,092	5,032	5,766	53½–57	69–77		7.60–10	
1973	10,903	51	73	692	745	4,651	6,095	55–135	69–105½		7.60–18.65	
1974	20,866	86	271	2,203	7,550	6,269	15,580				17–32	
1975	14,535	74	255	2,112	5,677	9,908	12,588	130–200	165–216		25½–27½	
1976	16,911	41	129	2,083	4,986	11,611	17,029				165.26	
1977	6,832	259	580	1,722	4,536	9,641	15,150	100–155	164–180		178	
1978	6,174	60	163	4,127	7,897	10,667	18,803	105–135	164–180		175	
1979	11,860	50	255	3,022	7,011	13,679	17,921	125–160	150–180		196	
1980[1]	11,646	34	216	2,590	7,277	12,224	15,771	145–165	150–180		200	
1981[1]		69		2,633		10,100					200	

[1] Preliminary. [2] Duty paid delivery, N.Y. [3] Imports for consumption. *Source: Bureau of Mines*

Apples

World Production of Apples (Dessert & Cooking) In Thousands of Metric Tons

Year	Mexico	Argentina	Australia	Spain	Belg-Lux.	Canada	France	Germany (West)	Italy	Japan	Netherlands	Turkey	United Kingdom	United States[2]	Yugoslavia	World Total
1969		446	424		312	433	1,841	2,573	2,010	1,085	475	620	390	3,093	483	15,913
1970		424	443		252	406	1,876	1,777	2,062	1,021	450	748	491	2,902	277	14,952
1971		512	360		280	398	1,854	1,980	1,698	1,007	520	780	466	2,890	327	15,233
1972		233	456		265	393	1,719	1,239	1,873	959	400	850	350	2,668	309	13,849
1973		233	335	1,015	246	375	2,060	2,016	2,050	963	460	850	456	2,830	448	15,719
1974	213	786	368	1,038	209	406	1,610	1,281	1,886	850	385	950	340	2,964	370	14,895
1975	230	608	368	1,091	268	460	2,125	2,035	2,127	898	430	900	338	3,415	370	16,910
1976	329	576	275	1,008	241	409	1,598	1,487	2,143	879	380	1,000	388	2,936	486	15,501
1977	297	820	301	672	120	411	1,186	1,176	1,828	959	315	900	234	3,057	381	13,934
1978	313	810	258	1,015	273	452	1,768	1,783	1,874	844	510	1,000	342	3,446	381	16,589
1979	338	972	345	1,097	322	435	1,746	1,951	2,023	852	450	1,350	334	3,694	428	18,028
1980[1]	202	958	288	859	328	553	1,831	1,880	1,910	958	450	1,100	321	4,005	483	17,618
1981[3]	260			1,020	130	411	1,468	1,000	1,780		220		243	3,592	380	
1982																

[1] Preliminary. [2] Commercial crop. [3] Estimate. *Source: Foreign Agricultural Service, U.S.D.A.*

Salient Statistics of Apples[1] in the United States

Year	Production: Total	Production: Having Value	Western Avg. Auction Price N.Y. $ Per Box: Golden Delicious	Western Avg. Auction Price N.Y. $ Per Box: Red Rome	Utilization of Quantities Sold: Fresh	Utilization of Quantities Sold: Processed: Canned	Processed: Dried	Processed: Frozen	Processed: Other[3]	Avg. Farm Price ¢ Per Lb.	Farm Value Million $	Foreign Trade[4]: Domestic Exports: Fresh	Domestic Exports: Dried[5]	Domestic Exports: Canned[5]	Imports Fresh & Dried[6]
	Millions of Pounds											Million Bushels			
1969	6,820	6,709	4.66	3.14	3,701	1,400	283	247	1,080	4.06	272.3	2.3	.2	—	1.9
1970	6,398	6,258	5.48	2.76	3,532	1,159	190	203	1,176	4.54	283.9	2.1	.2	—	2.1
1971	6,373	6,083	5.76	4.37	3,484	1,094	96	191	1,219	4.92	299.2	2.5	.1	—	1.8
1972	5,879	5,868	6.36	5.04	3,342	977	149	235	1,165	6.43	377.5	3.1	.3	—	2.3
1973	6,265	6,252	7.76	5.00	3,539	1,255	248	259	950	8.80	549.0	3.7	.3	—	1.9
1974	6,580	6,530	8.81	7.04	3,691	1,226	197	182	1,235	8.40	551.6	4.9	.2	—	1.6
1975	7,530	7,103	8.22	5.16	4,357	1,027	230	207	1,283	6.50	460.9	4.7	.2	—	2.6
1976	6,472	6,467	7.57	3.67	3,916	920	229	220	1,182	9.10	586.5	5.7	.2	—	2.6
1977	6,740	6,710	8.76	7.28	3,860	1,076	226	161	1,388	10.60	708.6	6.5	.4	—	2.9
1978	7,597	7,544	9.77	6.00	4,210	1,224	221	207	1,681	10.40	781.4	7.1	.3	—	3.7
1979	8,143	8,118			4,305	1,337	256	137	2,085	10.90	883.4	10.9	.3	—	3.3
1980[2]	8,828	8,810			4,962	1,226	198	168	2,257	8.60	761.0	12.0			
1981[2]	7,645	7,612								10.80	822.3				
1982															

[1] Commercial crop. [2] Preliminary. [3] Mostly crushed for vinegar, cider, & juice. [4] Year beginning July. [5] In terms of fresh.
Source: Statistical Reporting Service, U.S.D.A.

Wholesale Price of Apples (Delicious) in the United States In Dollars Per Box

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1969	7.666	8.282	6.929	7.347	6.925	N.A.	N.A.	N.A.	N.A.	4.049	4.318	4.920	6.305
1970	3.592	4.517	3.802	4.247	4.087	N.A.	N.A.	N.A.	N.A.	6.332	6.414	7.967	5.120
1971	N.A.	6.347	N.A.	6.793	6.614	6.873	N.A.	N.A.	N.A.	6.360	8.100	6.885	6.853
1972	6.045	6.393	5.956	6.164	5.903	5.748	N.A.	N.A.	N.A.	7.350	8.121	7.560	6.582
1973	7.300	6.490	7.773	8.687	8.333	10.387	N.A.	N.A.	N.A.	6.869	8.125	7.868	7.981
1974	7.110	7.370	6.066	6.650	8.500	N.A.	N.A.	N.A.	8.213	9.793	N.A.	8.320	7.753
1975	8.193	9.500	10.000	9.580	11.783	14.081	N.A.	N.A.	N.A.	7.261	7.272	7.440	9.457
1976	7.217	8.437	8.250	8.750	7.752	8.070	N.A.	N.A.	N.A.	9.610	9.008	9.785	8.542
1977	N.A.	10.900	10.030	9.794	9.725	9.935	N.A.	N.A.	N.A.	9.960	9.000	8.020	9.417
1978	11.183	11.280	11.305	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	21.612	14.000	13.876
1979	13.500	14.000	14.000	14.500	13.500	13.750	N.A.	N.A.	N.A.	12.750	14.500	15.250	13.972
1980	15.750	15.667	16.750	16.750	16.750	19.000	N.A.	N.A.	N.A.	12.500	12.000	12.000	15.240
1981	12.000	12.250	13.500	12.583	12.875	13.500	N.A.	N.A.	N.A.	16.000	15.125	15.500	13.704
1982	15.125	16.000											
1983													

Source: Bureau of Labor Statistics (0111-0215.01)

Arsenic

World supplies of arsenic continued tight in 1981. Since 1978, major world producers have allocated available supplies to customers. Supplies were curtailed in 1981 when shipments of arsenic from Sweden were halted for 6 weeks in May and the first half of June as a result of a labor strike in that country.

U.S. production of arsenic trioxide, which is recovered as a byproduct of copper production, is very small. A high percentage of domestic demand for arsenic is met by imports (there is no arsenic recovered from scrap sources). Major sources of imports in the 1977–80 period were: Sweden—33 percent; Mexico—30 percent; France—30 percent; others—7 percent.

Four major pesticide and desiccant producers and two major wood preservative producers consume 90 percent of all arsenic used in the U.S. Estimated distribution of arsenic in 1981 by major use was as follows: industrial chemicals (wood preservatives and mineral flotation reagents)—45 percent; agricultural chemicals (herbicides and plant desiccants)—45 percent; glass and ceramics—5 percent; nonferrous alloys—3 percent; other uses (animal feed additives and pharmaceuticals)—2 percent.

Effective April 1, 1981, taxes were collected from companies producing and importing 42 chemicals and petroleum products designated as hazardous. As hazardous chemicals, arsenic metal and arsenic trioxide were taxed at the rate of $4.45 and $3.41 per short ton, respectively.

All prices of trioxide increased in 1981, with Mexican trioxide posting the largest percentage gain. But, the price of domestically produced metal decreased late in 1981 after earlier firmness.

World Production of White Arsenic (Arsenic Trioxide) In Short Tons

Year	Portugal	Spain	Brazil	Canada	France	W. Germany	U.S.S.R.	Japan	Mexico	Peru	Rep. of Korea	Sweden	Nambia[3]	World Total
1969	272	101	331	170	15,000	648	7,830	639	8,800	530	N.A.	18,188	2,444	54,953
1970	209	19	328	71	11,236	408	7,880	974	10,075	851	N.A.	18,078	4,478	54,607
1971	205	—	163	50	11,000	40	7,880	1,054	12,658	723	N.A.	17,600	4,080	55,453
1972	15	—	181	30	8,423	491	7,940	471	6,523	1,123	N.A.	17,857	2,612	45,666
1973	399	—	76	—	9,000	520	7,990	322	5,606	1,528	10	16,755	8,981	51,187
1974	290	—	20	—	9,000	401	8,050	213	10,477	2,175	18	16,190	7,319	54,153
1975	282	—	14	—	7,300	350	8,100	66	6,747	1,461	110	12,884	7,345	44,659
1976	306		0		8,023	400	8,200	66	6,062	879	1,028	7,411	5,646	38,021
1977	245		—		6,661	400	8,300	N.A.	6,332	1,507	713	7,443	2,882	34,483
1978	220				6,500	400	8,400	N.A.	6,884	1,386	604	7,372	2,647	34,413
1979	240				6,100	400	8,500	N.A.	7,206	2,690	650	5,600	2,448	33,834
1980[1]	220				5,800	400	8,500	N.A.	7,200	2,800	N.A.	4,500	2,200	31,620
1981[2]					5,800		8,500		7,200	2,800		4,500	2,200	31,600
1982														

[1] Preliminary. [2] Estimate. [3] Output of Tsumbe Corp. Ltd. only. *Source: Bureau of Mines*

Salient Statistics of White Arsenic in the U.S. In Short Tons

	Imports For Consumption					Price		¢ lb. 12/31		Imports of Arsenic Trioxide from						
Year	Trioxide (As_2O_3)	Metallic Arsenic	Arsenic Acid	Sulfide	Arsenic Compounds	Powered in Barrels ¢ lb.[3]	Value of Imports Thous. $	Trioxide Domestic[4] 95% As_2O_3	Metal Domestic 99% As	Peru	Canada	France	Mexico	South Africa	Sweden	Bel-Lux.
1969	18,171					6¼–6¾	2,064			255		4,336	7,361	121	6,071	
1970	18,763					6¼–6¾	2,089			100		2,650	7,750	111	8,142	
1971	17,306					6¼–6¾	2,187			68		1,425	8,316	196	7,276	
1972	13,613	661				6¼–6¾	1,956			24		1,556	3,552	285	8,184	
1973	13,496	643			—	6¼–6¾	2,045			25		1,281	5,605	409	6,144	
1974	13,742	707			43	13	2,449			24	—	480	6,185	145	6,889	
1975	12,013	483			77	20–23	4,426	13.1	160	66	—	595	3,174	970	7,172	
1976	4,262	288			355	20–21	1,528	13.1	175	—	—	462	3,793	—	3	
1977	5,981	357	382	—	1,109	20–21	1,962	13.1	190	—	22	1,352	3,089	—	1,323	
1978	10,306	369	565	—	473	28–32	5,918	23¼	190	—	136	5,077	2,603	—	2,281	189
1979	12,325	405	176	39	1	32	7,728	24¼	190	477	277	3,242	3,125	—	5,014	184
1980[2]	12,528	266	271	11	1	35	9,190	31¾	300	—	486	2,780	3,720		4,770	388
1981[1]	13,000	450				45		40	275							
1982																

[1] Estimate. [2] Preliminary. [3] Refined, 99%, at N.Y. docks. [4] F.O.B. Tacoma, Wash. *Source: Bureau of Mines*

Barley

U.S. production of barley in 1981/82 was a record 478 million bushels, 33 percent above 1980/81 and 25 percent greater than production in 1979/80. The record crop resulted from increased harvested acreage and record yields in two of the major producing States, North Dakota and Minnesota.

Barley disappearance for 1981/82 was projected at 475 million bushels, 12 percent above 1980/81. Domestic feed and residual disappearance during 1981/82 was estimated by the USDA at 200 million bushels, an increase of about 26 million from the previous season. Exports were projected to increase by 23 million bushels to 100 million. Indicated disappearance during October–December 1981 was 121 million bushels, 33 percent above the previous year, primarily because of increased barley exports.

Ending stocks for 1981/82 were forecast by the USDA to total 151 million bushels, 14 million above the year-earlier level. The stocks-to-use ratio of 32 percent was unchanged from 1980/81. Barley stored in all positions on January 1, 1982 totaled 332 million bushels, 10 percent more than a year earlier, but 9 percent below January 1, 1980 stocks.

Farm prices of barley were projected to average $2.45 to $2.55 per bushel in 1981/82, down from $2.85 in 1980/81. Barley prices during July–October 1981 averaged $2.40. Barley averaged $2.49 per bushel in November and December 1981.

Acreage harvested for grain in 1981 was estimated by the USDA at 9.2 million acres, 26 percent above 1980. Area harvested in 1980 was the smallest since 1934. Yield per harvested acre averaged a record 52.3 bushels, 2.7 bushels above the previous year's yield.

According to the February 18th USDA prospective plantings report, producers intended to plant nearly 10 million acres of barley in 1982, a 3-percent increase from 1981. North Dakota, the leading state, indicated plantings of 2.5 million acres, up 11 percent. Minnesota, with 1.2 million acres, was up 10 percent. Montana and Idaho, at 1.5 and 1.1 million acres, respectively, indicated increases of 4 percent. Washington acreage was unchanged, but California and South Dakota indicated acreage reductions of 18 and 10 percent, respectively.

In Canada, 6,455,000 tonnes of barley were delivered by producers to licensed elevators during the 1980/81 crop year, compared with 5,439,000 tonnes the previous year. Deliveries during the 1981/82 crop year (which began August 1, 1981) up to February 17, 1982 totaled 3,180,200 tonnes vs. 1,581,000 tonnes for the same period the previous year. Export shipments during August–December 1981 were approximately 200,000 tonnes ahead of the record export year of 1979/80. With abundant supplies, strong world demand and continued Soviet purchases, Canadian barley exports were expected by the USDA to reach a new record in 1981/82.

U.S. Government Price Support

U.S. barley producers received about $45 million in deficiency payments in early December 1981, because prices for the first 5 months of the 1981/82 marketing year averaged 11 cents below the $2.60 target price for 1981.

The 1982 target price for barley remained at $2.60 per bushel. The 1982 loan rate for barley entered into the Grain Reserve was increased to $2.37 per bushel from $2.07 in 1981 while the 1982 regular loan rate was increased to $2.08 per bushel from $1.95 per bushel in 1981.

However, the only producers eligible for 1981/82 regular and Grain Reserve loans, and target price protection, were those who enrolled their acreage in the voluntary 10 percent 1982 feedgrain acreage set-aside program.

Futures Market

Barley futures are traded on the Winnipeg Commodity Exchange.

World Production of Barley In Thousands of Metric Tons

Crop Years	China	United States	Argentina	Canada	Rep. of Korea	Denmark	Morocco	France	India	Japan	U.S.S.R.	W. Germany	Spain	Turkey	United King.	World Total
1969–0		9,298	570	8,238	2,066	5,255	1,310	9,452	2,424	812	26,800	4,796	3,969	3,700	8,663	117,354
1970–1		9,060	367	9,050	1,974	4,813	1,477	8,126	2,716	573	31,600	4,611	3,092	3,300	7,529	119,579
1971–2		10,094	553	13,099	1,857	5,458	1,675	8,930	2,784	503	34,564	5,601	4,783	4,170	8,558	136,475
1972–3		9,220	880	11,285	1,965	5,572	1,744	10,425	2,577	325	36,800	5,817	4,358	3,725	9,238	138,500
1973–4		9,188	732	10,224	1,778	5,507	1,255	10,844	2,379	216	55,044	6,622	4,402	2,900	9,007	157,992
1974–5		6,619	430	8,802	1,388	5,967	2,387	10,037	2,371	233	54,161	7,048	5,404	3,330	9,133	159,881
1975–6		8,361	523	9,520	1,700	5,156	1,585	9,344	3,135	221	35,808	6,971	6,728	4,500	8,513	144,467
1976–7		8,099	760	10,513	1,759	4,768	2,761	8,319	3,192	210	69,539	6,487	5,473	4,900	7,648	177,987
1977–8	6,860	9,144	353	11,799	814	6,084	1,345	10,290	2,344	206	52,687	7,483	6,693	4,750	10,520	104,546
1978–9	6,700	9,776	554	10,387	1,348	6,301	2,326	11,321	2,311	326	62,077	8,608	8,608	4,750	9,850	181,902
1979–0	6,800	8,334	339	8,460	1,508	6,662	1,886	11,196	2,121	406	47,900	8,184	6,150	5,000	9,613	160,053
1980–1[1]	6,300	7,859	340	11,259	811	5,939	2,300	11,755	2,000	385	48,600	8,856	8,600	5,200	10,300	167,603
1981–2[2]		10,414		13,384												
1982–3																

[1] Preliminary. [2] Estimated. *Source: Foreign Agricultural Service, U.S.D.A.*

U.S. Barley Acreage and Prices

Year Beginning June 1	Acreage (Million Acres)				Yield per Harvested Acre In Bushels	Seasonal Prices				Govt. Price Support Operations			
	National Program	Set-aside	Planted	Harvested for Grain		Received by Farmers[1]	Minneapolis No. 3 or Better Feed[2]	Minneapolis No. 3 or Better Malting[3]	Portland No. 2 Western	National Avg. Loan Rate	Support or Target Price	Placed Under Loan (Mil. Bu.)	Total Payments to Participants (Mil. $)
						Dollars per Bushel							
1971–2	18.0	0	11.1	10.2	45.7	.99	1.04	1.13	1.49	.81	0	88.9	0
1972–3	18.0	4.9	10.6	9.7	43.7	1.17	1.17	1.39	1.68	.86	0	41.7	107.2
1973–4	17.3	1.4	11.0	10.3	40.5	2.13	2.03	2.63	2.69	.86	1.34	15.3	77.7
1974–5	[6]	0	8.7	7.9	37.7	2.81	2.58	4.16	3.02	.90	1.13	6.9	16.0[7]
1975–6	[6]	0	9.4	8.6	44.0	2.42	2.38	3.51	2.54	.90	1.13	9.2	4.9[7]
1976–7	[6]	0	9.3	8.4	45.4	2.25	2.35	3.13	2.48	1.22	1.28	19.2	10[7]
1977–8	11.7	0	10.8	9.7	44.0	1.78	1.68	2.27	2.15	1.63	2.15	86.9	121[8]
1978–9	7.5	.8	10.0	9.2	49.2	1.92	1.80	2.38	2.10	1.63	2.25	68.0	97[9]
1979–0	7.8	.7	8.1	7.5	50.9	2.29	2.16	2.87	2.69	1.71	2.40	30	22[8]
1980–1[4]	8.7	—	8.3	7.3	49.6	2.85	2.60	3.64	3.34	1.83	2.55	31	31[7]
1981–2[5]	10.2	—	9.7	9.2	52.3	2.45–2.55	2.22	3.06	2.83	1.95	2.60	54	58[8]
1982–3[5]			10.0							2.08	2.60		

[1] Excludes support payments. [2] Beginning June 1977, No. 2 Feed. [3] 60% to 70% plump or better. [4] Preliminary. [5] Estimate. [6] Available for total feed grains only. [7] Disaster payments. [8] Deficiency & disaster payments. [9] Deficiency, disaster & diversion payments. *Source: Commodity Economic Division, U.S.D.A.*

Production of Barley in the United States, by States In Millions of Bushels

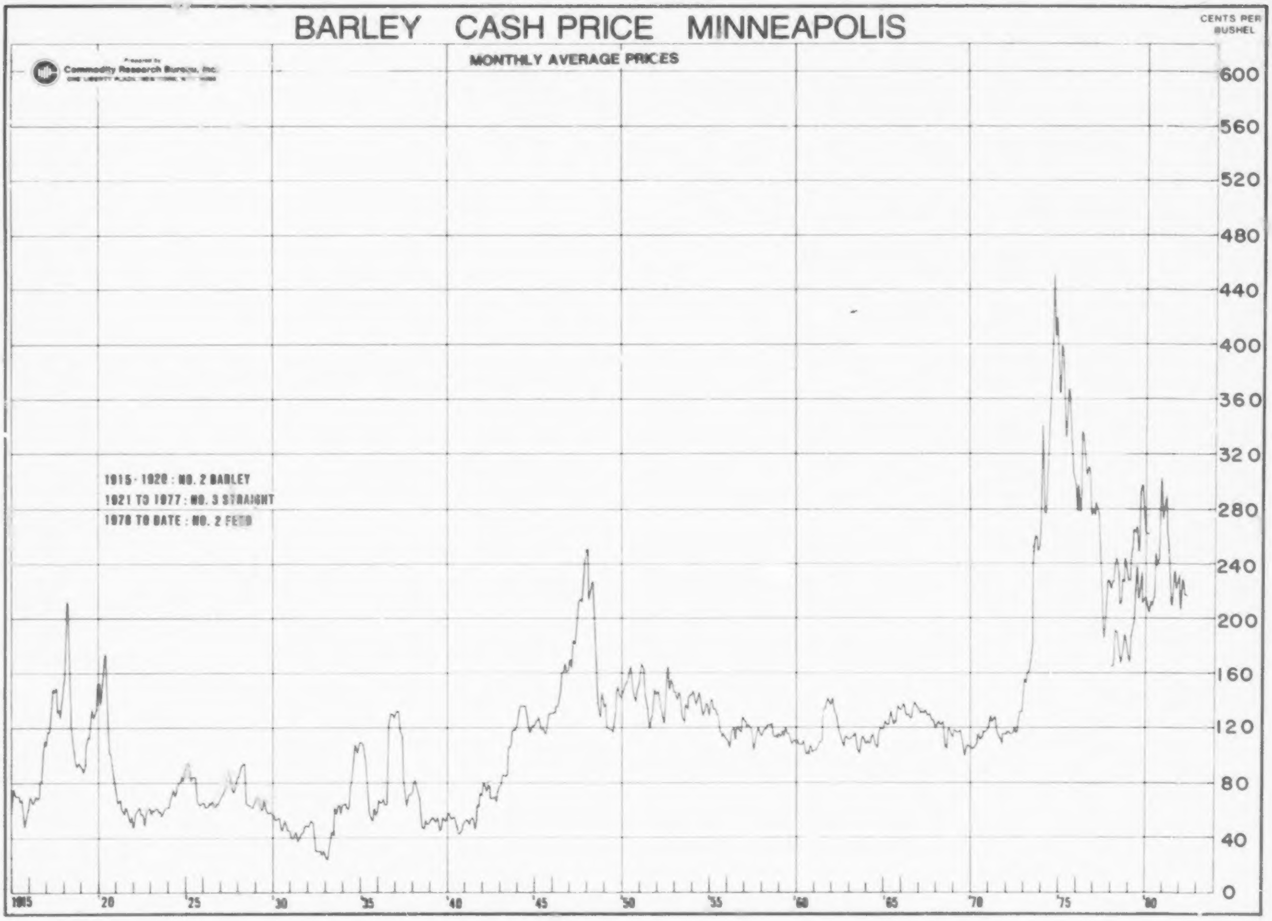
Year	Arizona	California	Colorado	Idaho	Kansas	Minnesota	Oklahoma	Montana	North Dakota	Oregon	Pennsylvania	Utah	South Dakota	Washington	U.S Total
1970	10.6	58.8	14.6	41.3	6.9	21.5	23.4	65.1	65.9	18.2	8.6	8.2	12.1	19.9	416.1
1971	8.8	53.3	13.9	41.4	7.4	40.7	15.4	58.8	99.8	18.1	9.0	8.5	19.6	27.8	462.4
1972	6.9	50.9	11.0	39.7	4.3	34.0	8.8	64.0	104.7	12.0	7.4	8.1	20.7	14.2	421.7
1973	8.3	47.9	12.3	43.5	3.0	41.1	7.3	60.0	102.5	9.2	5.7	7.7	22.1	13.5	417.4
1974	4.3	45.6	10.0	31.7	1.5	28.9	2.8	37.5	56.3	8.6	7.7	7.1	12.8	12.4	298.7
1975	4.9	60.4	12.2	37.8	1.9	30.6	2.4	50.7	79.8	8.7	6.5	8.1	16.5	20.1	379.2
1976	4.3	56.6	13.5	43.2	2.4	35.3	3.1	52.1	81.3	7.4	5.4	6.9	6.0	21.1	383.0
1977	4.2	53.2	13.6	44.2	2.8	55.1	4.2	52.2	98.7	8.9	6.3	6.2	26.9	9.5	427.8
1978	2.5	45.6	14.3	63.2	2.3	52.0	2.7	55.9	112.7	10.8	4.5	9.8	20.9	23.2	454.8
1979	3.2	47.4	18.7	54.9	2.3	40.8	2.5	40.6	75.9	8.3	4.0	10.4	20.8	17.0	382.8
1980	4.5	44.1	15.9	59.0	2.1	34.6	1.7	44.1	48.0	10.1	3.8	10.8	15.2	32.3	361.0
1981[1]	4.1	40.3	18.9	63.1	1.7	57.7	1.6	56.8	105.6	11.7	4.1	9.8	20.1	44.1	478.3

[1] Preliminary, December estimate. *Source: Crop Reporting Board, U.S.D.A.*

High, Low & Closing Prices of May Barley Futures at Winnipeg In Canadian Dollars per Tonne

Year of Delivery		Year Prior to Delivery							Delivery Year					Life of Delivery Range
		June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	
1978	High	—	79.00	79.90	77.00	78.20	77.10	78.00	80.00	79.50	83.30	84.00	82.00	84.00
	Low	—	75.30	72.40	72.30	70.50	72.80	75.40	76.00	77.50	77.50	76.50	77.40	70.50
	Close	—	76.70	74.00	75.90	74.20	75.80	76.60	77.80	78.50	82.10	77.70	81.60	—
1979	High	—	73.80	74.00	74.80	80.20	78.50	77.40	80.00	81.90	84.00	93.20	106.40	106.40
	Low	—	72.00	71.50	70.90	74.50	74.70	75.40	76.50	78.20	80.00	82.10	93.00	70.90
	Close	—	72.00	71.80	74.50	77.50	76.60	76.50	78.40	81.10	82.50	92.60	101.30	—
1980	High	108.10	107.90	107.70	112.00	117.30	117.60	121.40	123.10	116.90	116.40	116.00	130.10	130.10
	Low	89.00	89.70	93.70	103.70	107.00	111.40	112.30	112.50	111.20	110.70	109.40	110.40	89.00
	Close	104.30	92.40	107.70	111.50	115.00	114.90	121.10	116.50	111.80	111.10	110.60	124.50	—
1981	High	131.50	139.50	139.60	143.50	150.30	165.00	166.50	162.90	156.90	153.30	153.90	153.50	166.50
	Low	121.40	126.50	130.00	137.50	137.20	149.60	141.90	150.70	151.40	145.30	146.20	145.50	121.40
	Close	128.00	138.10	139.50	141.60	149.30	164.00	160.80	150.80	151.60	146.80	153.90	145.50	—
1982	High	144.00	144.20	141.90	133.10	134.70	133.00	130.80	133.20	132.90	128.20	125.50		
	Low	133.60	136.20	128.50	127.50	129.00	127.00	126.60	128.80	126.80	118.00	121.30		
	Close	134.60	142.30	131.00	129.50	132.90	127.50	129.10	131.50	127.00	125.30	122.00		
1983	High													
	Low													
	Close													

Source: Winnipeg Commodity Exchange



Average Cash Price of No. 2[2], Feed Barley, in Minneapolis In Cents Per Bushel

Year	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Average
1971–2	108	100	95	99	104	104	104	107	107	105	106	108	104
1972–3	105	96	98	111	110	114	127	134	120	119	125	136	117
1973–4	151	167	212	212	202	180	212	234	251	232	174	210	203
1974–5	236	236	269	248	307	317	289	282	259	226	224	205	258
1975–6	167	204	277	300	283	242	223	211	226	236	239	250	238
1976–7	262	245	248	268	246	221	205	220	235	229	228	213	235
1977–8	176[2]	163	150	158	166	165	165	165	165	166	191	190	168
1978–9	184	171	168	177	181	188	179	171	169	186	189	196	180
1979–0	216	239	215	222	234	211	215	209	204	206	212	209	216
1980–1	215	248	239	243	277	303	275	281	290	263	251	239	260
1981–2[1]	209	226	235	221	226	231	206	220	227	219			
1982–3													

[1] Preliminary. [2] Prior to June 1977 prices are for No. 3 or better. *Source: Economic Research Service, U.S.D.A.*

Month End Open Interest of Barley Futures at Winnipeg In Units (20 Tonne)

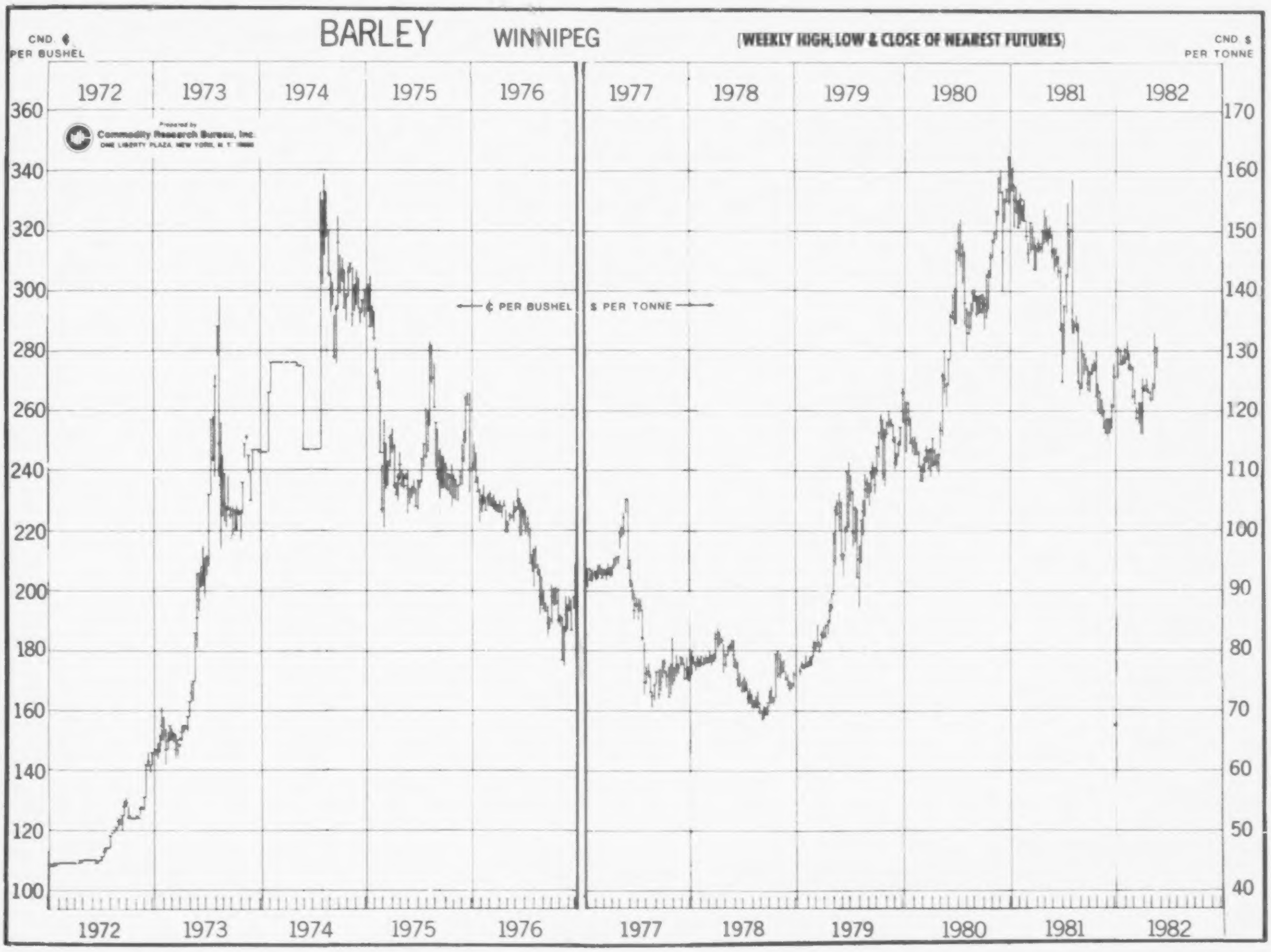
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	6,228	5,951	4,700	6,414	5,377	8,888	8,163	10,022	13,955	14,157	15,493	13,439
1979	16,704	18,864	18,579	23,142	17,635	23,336	26,643	25,193	24,230	20,466	22,107	21,468
1980	19,105	17,631	14,848	14,027	15,842	17,658	18,224	18,724	21,082	16,574	16,173	13,496
1981	14,560	13,335	13,836	16,380	14,252	12,968	15,101	16,620	16,086	10,971	10,591	8,832
1982	8,485	7,838	7,096	6,684								

Source: Winnipeg Commodity Exchange

Salient Statistics of Barley in the United States In Millions of Bushels

Year & Periods Begin. June 1	Supply				Disappearance							Ending Stocks		
					Domestic Use									
	Beginning Stocks	Production	Imports	Total Supply	Food	Alc. Beverages	Seed	Feed & Residual	Total	Exports	Total Disappearance	Gov't. Owned[1]	Privately Owned[2]	Total Stocks
1975–6	92.2	379.2	15.7	487.1	5.0	124.8	15.7	189.3	334.8	23.9	358.7	—	128.4	128.4
1976–7	128.4	383.0	10.8	522.2	5.0	131.5	18.2	174.9	329.6	66.2	395.8	—	126.4	126.4
1977–8	126.4	427.8	9.4	563.6	6.0	133.1	16.7	177.5	333.3	57.2	390.5	—	173.1	173.1
1978–9	173.1	454.8	10.5	638.4	6.0	147.5	13.6	217.6	384.7	25.7	410.4	2.5	225.5	228.0
1979–0	228.0	382.8	11.8	622.6	7.0	151.0	14.0	203.7	375.7	54.8	430.5	3.2	188.9	192.1
June–Sept.	228.0	382.8	3.7	614.5	2.5	51.9	1.1	87.3	142.8	9.9	152.7	2.9	458.9	461.8
Oct.–Dec.	461.8	—	2.8	464.6	1.7	33.9	2.0	39.0	76.6	22.4	99.0	3.1	362.5	365.6
Jan.–Mar.	365.6	—	3.2	368.8	1.7	37.3	3.4	53.0	95.4	11.1	106.5	3.3	259.0	262.3
Apr.–May	262.3	—	2.1	264.4	1.1	27.9	7.5	24.4	60.9	11.4	72.3	3.2	188.9	192.1
1980–1[3]	192.1	361.0	10.2	563.3	7.0	155.3	13.2	173.8	349.3	76.7	426.0	3.4	133.9	137.3
June–Sept.	192.1	361.0	3.5	556.6	2.5	56.6	1.2	78.9	139.2	24.9	164.1	3.5	389.0	392.5
Oct.–Dec.	392.5	—	2.3	394.8	1.7	33.9	2.2	32.2	70.0	21.4	91.4	3.5	299.9	303.4
Jan.–Mar.	303.4	—	2.7	306.1	1.7	36.0	3.7	38.6	80.0	22.7	102.7	3.4	200.0	203.4
Apr.–May	203.4	—	1.7	205.1	1.1	28.8	6.1	24.1	60.1	7.7	67.8	3.4	133.9	137.3
1981–2[4]	137.3	478.3	10.4	626.0	7.0	154.5	13.5	200.0	375.0	100.0	475.0			151.0
June–Sept.	137.3	478.3	2.4	618.0	2.5	51.3	1.2	79.4	134.4	32.6	167.0	3.3	447.7	451.0
Oct.–Dec.	451.0	—	2.4	453.4	1.7	39.0	2.2	45.0	87.9	33.0	120.9	3.3	329.2	332.5
Jan.–Mar.														

[1] Uncommitted inventory. [2] Includes quantity under loan & farmer-owned reserve. [3] Preliminary. [4] Estimate.
Source: Commolity Economics Division, U.S.D.A.



Bauxite

U.S. bauxite production in 1981 was estimated by the U.S. Bureau of Mines at 1.5 million tonnes, about 5 percent less than 1980 output. Most of the bauxite consumed in the U.S. is imported. Estimated total imports of crude and dried bauxite for consumption in 1981 were 6 percent below the 1980 level. In 1981, bauxite imports from Brazil, Haiti, and Sierra Leone increased considerably, while imports from traditional major suppliers, Jamaica, Guinea, and Surinam were lower than in 1980.

U.S. imports of alumina, the intermediate product between bauxite and aluminum, were about 9 percent lower in 1981 than in 1980, breaking an upward trend that began in 1966. The principal suppliers were Australia (74 percent), Jamaica (13 percent), and Surinam (11 percent). Total U.S. exports of alumina in 1981 dropped a sharp 35 percent from 1980. Major reductions occurred in exports to Canada, Ghana, Norway, Sweden, and Venezuela.

Nine U.S. refineries processed into alumina an estimated 93 percent of all domestic and imported bauxite consumed in 1981. About 90 percent of the alumina was reduced to aluminum metal. Domestic consumption of bauxite in 1981 was about 3 percent below 1980 use, reflecting the downturn in demand for aluminum, particularly during the last quarter of 1981. The net import reliance continued at about 94 percent of estimated U.S. apparent consumption in 1981. However, all of the refractory-grade bauxite, which is consumed primarily by the steel industry in high-temperature applications, is imported.

U.S. industry stocks of bauxite at the end of 1981 were estimated to be about 4 percent larger than a year earlier. As of November 30, 1981, the National Defense Stockpile goal for metal-grade bauxite was about 21.3 million tonnes (mostly Jamaica type), and inventory 9 million tonnes. The stockpile goal for refractory-grade bauxite was 1.4 million tonnes and the inventory totaled only about 177,000 tonnes. On November 24, 1981, at the President's direction, the Federal government began negotiations with the government of Jamaica for the purchase of 1.6 million long tons of Jamaican bauxite. The President stated that the National Defense Stockpile was 12 million tons short of the ore, which is critical to industries "that are essential to support a mobilization effort." The ore was to be obtained through direct purchases, in exchange for surplus stockpile materials, and (for the first time in 15 years) in a barter program involving agricultural commodities. However, in early 1982, plans to carry out the purchase of 1.6 million long tons (dry) of metallurgical-grade bauxite from Jamaica were meeting with difficulties.

World Production of Bauxite In Thousands of Metric[4] Tons

Year	Brazil	Guyana[3]	France	Guinea	Hungary	Indonesia	Australia	Malaysia	Greece	Surinam	U.S.S.R.[3]	Jamaica[3]	United States[3]	Yugoslavia	World Total
1972		3,291	3,203	2,018	2,321	1,256	14,209	1,059	2,398	7,654	4,100	12,345	1,812	2,162	64,021
1973		3,224	3,084	3,000	2,559	1,200	17,535	1,200	2,600	6,580	4,200	13,385	1,879	2,133	68,563
1974	845	3,200	2,892	7,480	2,708	1,270	19,679	933	2,739	6,600	4,200	15,086	1,949	2,333	78,362
1975	954	3,200	2,523	8,273	2,844	977	20,672	692	2,958	4,850	4,300	11,388	1,772	2,270	73,610
1976[4]	827	2,686	2,330	10,848	2,918	940	24,084	660	2,551	4,613	4,500	10,296	1,989	2,033	77,417
1977	1,120	2,731	2,059	10,841	2,949	1,301	26,086	616	2,882	4,805	4,600	11,433	2,013	2,044	82,068
1978	1,160	2,425	1,978	10,456	2,899	1,008	24,293	615	2,664	5,188	4,600	11,777	1,669	3,565	79,851
1979[1]	2,388	2,312	1,969	13,700	2,976	1,052	27,583	387	2,915	5,010	4,600	11,505	1,821	3,012	87,676
1980[2]	3,970	2,348	1,665	13,780	3,020	1,224	27,584	920	2,950	4,696	4,600	12,261	1,559	3,138	89,933
1981[2]	4,200	2,350		14,000	3,050		24,500		2,900	4,100	4,600	12,000	1,460	3,150	86,360

[1] Preliminary. [2] Estimate. [3] Dry Bauxite equivalent of ore processed. [4] Data prior to 1976 are in THOUSANDS OF LONG TONS. *Source: Bureau of Mines*

U.S. Salient Statistics of Bauxite In Thousands of of Metric[6] Tons

			Mine Production			Recovery of Processed Bauxite	Processed Bauxite Recovered[1]		Dry Equivalent			Stocks, Dec. 31			
Year	Net Import Reliance as a % of Apparent Consumption	Av. Price F.O.B. Mine $ per Ton	Crude	Dried Equivalent	Value ($1.000)	Crude Ore Treated	Total	Dried Equiv.	Imports[2]	Exports[3]	Consumption	Producers & Processors	Consumers	Govt.	Total
1972		5–15	2,200	1,812	23,238	399	210	319	12,601	29	15,375	791	2,797	16,453	20,041
1973		5–15	2,287	1,879	26,635	338	169	287	13,403	12	16,650	684	2,165	16,029	18,878
1974		5–15	2,370	1,949	25,663	348	177	279	14,976	16	16,904	534	3,982	15,152	19,669
1975[6]	91	5–15	2,199	1,801	25,083	361	182	287	11,714	20	12,587	494	5,293	15,308	21,094
1976	91	5–15	2,420	1,989	26,645	366	175	289	12,749	15	14,039	526	4,923	15,308	20,756
1977	91	5–15	2,436	2,013	27,555	419	169	294	12,989	26	14,528	685	7,264	15,087	23,036
1978	93	5–15	2,066	1,669	23,185	379	154	236	13,847	13	14,738	556	7,806	14,661	23,023
1979	93	5–15	2,186	1,821	24,875	466	235	336	13,780	15	15,697	620	7,958	14,661	23,239
1980[4]	94	6–16	1,869	1,559	22,353	355	179	277	14,087	33	15,962	661	7,749	14,661	23,071
1981[5]	94	6–16		1,486					13,213	23		—	8,700	—	

[1] Calcined, or sintered. [2] Imports for consumption. "As shipped" basis. [3] Including concentrates. [4] Preliminary. [5] Estimate
[6] Data prior to 1975 are in THOUSANDS OF LONG TONS. *Source: Bureau of Mines*

Beer

United States Production of Beer (Fermented Malt Liquors) In Millions of Barrels (of 31 Wine Gallons[1])

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1969	8.99	8.81	10.99	11.43	11.28	10.17	13.09	11.98	11.61	10.81	8.54	9.62	127.32
1970	9.56	9.31	11.84	12.45	12.45	13.40	12.38	11.33	11.01	10.28	9.30	9.82	133.12
1971	9.62	9.41	12.53	12.33	12.37	13.72	13.28	12.28	11.41	10.53	9.87	10.02	137.36
1972	9.96	10.38	12.62	12.53	13.25	14.21	13.18	13.06	11.41	11.24	9.93	9.59	141.34
1973	10.98	10.73	13.14	12.86	13.83	13.09	13.76	14.17	12.12	12.38	10.90	10.65	148.60
1974	12.19	10.98	13.05	13.09	14.71	15.04	15.75	14.61	12.67	12.28	10.71	11.11	156.20
1975	12.55	11.18	12.41	14.50	14.34	15.76	16.08	14.72	13.35	12.35	11.22	12.15	160.60
1976	12.44	11.89	11.86	13.69	15.18	15.76	16.54	16.10	14.31	13.42	11.29	11.19	163.66
1977	11.98	11.48	16.20	16.03	16.79	16.90	15.92	15.31	13.26	12.61	12.02	12.01	170.51
1978	12.87	12.71	15.86	15.62	16.57	16.88	16.74	17.61	14.63	14.01	12.71	12.87	179.09
1979[2]	13.83	13.57	16.89	16.34	16.97	16.77	16.94	16.76	14.70	25.28	13.14	12.18	184.19
1980[2]	14.64	14.72	16.56	16.36	17.97	17.93	18.72	17.02	16.29	14.95	13.02	13.32	193.54
1981[2]	13.31	14.58	16.72	17.68	18.87	18.63	18.80	17.72	15.72	14.61	13.12		
1982													

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[1] "Wine gallon" or "gallon" is a U.S. gallon of liquid measure equivalent to the volume of 231 cubic inches. [2] Preliminary.
Source: Internal Revenue Service

Tax-Paid Withdrawals of Beer (Fermented Malt Liquors) in the U.S.
In Millions of Barrels (of 31 Wine Gallons[1])

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1969	7.88	7.66	9.40	10.06	10.25	9.15	11.96	11.44	11.80	10.14	8.28	9.24	116.27
1970	8.47	8.04	10.35	10.66	11.45	11.90	11.87	10.79	10.38	9.62	8.77	9.74	121.86
1971	8.19	8.52	11.00	11.04	11.05	12.88	12.50	11.89	10.96	9.80	9.74	9.83	127.40
1972	8.62	9.09	11.69	11.09	12.41	13.12	12.22	12.89	10.89	10.61	9.92	9.27	131.81
1973	9.67	9.43	12.01	11.65	12.87	12.55	12.77	13.68	11.52	11.54	10.73	10.08	138.47
1974	10.97	9.87	11.82	11.74	13.76	13.86	14.73	13.89	12.09	11.59	10.42	10.74	145.46
1975	11.12	9.84	11.57	13.01	13.42	14.44	14.75	13.88	12.51	11.90	10.61	11.59	148.64
1976	10.86	11.00	10.99	12.91	13.59	14.16	15.01	14.86	13.44	12.22	10.52	10.83	150.39
1977	10.01	10.43	14.55	14.28	15.00	15.71	14.80	14.64	12.89	11.62	11.49	11.51	156.92
1978	10.69	11.01	14.20	13.60	14.96	15.82	15.29	16.28	13.72	12.99	12.04	11.57	162.15
1979	12.32	12.01	15.01	14.96	15.00	15.57	15.13	15.56	13.71	13.64	12.52	11.08	168.12
1980	12.54	12.49	14.08	14.33	16.19	15.81	17.08	15.35	14.51	13.53	12.51	12.38	173.37
1981	12.08	12.41	15.01	15.47	17.00	17.29	17.37	16.22	14.68	13.84	12.39		
1982													

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[1] "Wine gallon" or "gallon" is a U.S. gallon of liquid measure equivalent to the volume of 231 cubic inches.
Source: Internal Revenue Service

U.S. Stocks of Beer (Fermented Malt Liquors) at End of Month In Millions of Barrels (of 31 Wine Gallons[1])

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1969	11.91	12.33	13.00	13.37	13.37	13.57	13.55	13.12	13.05	12.81	12.38	11.90
1970	12.43	12.99	13.46	14.13	14.20	14.69	14.18	13.76	13.45	13.22	12.96	12.26
1971	12.97	13.20	13.81	14.07	14.40	14.26	14.16	13.64	13.31	13.31	12.78	12.23
1972	12.97	13.64	13.82	14.51	14.45	14.40	14.49	13.76	13.54	13.36	12.77	12.44
1973	13.07	13.70	14.01	14.43	14.48	14.20	14.30	13.81	13.58	13.52	12.93	12.76
1974	13.17	13.56	13.92	14.32	14.31	14.47	14.33	14.04	13.72	13.53	13.04	12.58
1975	13.21	13.54	13.76	14.26	14.17	14.30	14.45	14.18	13.98	13.48	13.20	12.74
1976	13.39	13.33	13.31	13.06	13.53	13.89	14.03	13.92	13.60	13.69	13.48	12.91
1977	14.01	14.17	14.58	15.03	15.57	15.37	15.13	14.45	13.58	13.53	13.02	12.42
1978	13.92	14.07	14.56	15.01	14.99	14.55	19.81	14.33	14.01	13.71	13.50	13.76
1979[2]	14.00	14.06	14.44	14.98	14.74	14.50	14.83	14.30	13.87	12.59	13.37	13.29
1980[2]	13.33	13.83	14.84	15.31	17.44	15.43	14.72	14.45	15.01	14.18	13.94	13.96
1981[2]	13.98	14.95	15.12	15.26	15.78	15.24	14.98	14.53	14.42	13.99	13.38	
1982												

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[1] "Wine gallon" or "gallon" is a U.S. gallon of liquid measure equivalent to the volume of 231 cubic inches. [2] Preliminary.
Source: Internal Revenue Service

Bismuth

U.S. production of bismuth is insignificant, and most domestic needs are met by imports.

Imports of bismuth in 1981 were 10 percent higher than in 1980, according to preliminary data of the U.S. Bureau of Mines. Major sources of U.S. imports of bismuth metal in 1981 were (in order of importance): Peru, Mexico, the United Kingdom, Belgium-Luxembourg, and Japan. Imports from the Federal Republic of Germany dropped sharply from the 1980 level. The U.S. also exports a small amount of bismuth, bismuth alloys, and scrap. Canada continued as the major destination for U.S. exports, but the total volume of exports was 39 percent below the 1980 level.

U.S. consumption of bismuth in 1981 was virtually the same as in 1980. Bismuth metal consumed in pharmaceuticals (its major use) was 18 percent above the level of 1980. Its use in fusible alloys was less than 2 percent higher than in 1980, but use in metallurgical additives experienced a 42.5 percent decline from the 1980 level, as the demand for various capital goods was reduced. The domestic bismuth consumption pattern changed in 1981. Pharmaceuticals increased their share of total consumption to 57.4 percent from about 50 percent in 1980. The share of the market accounted for by metallurgical additives dropped to about 11.7 percent from 23 percent, whereas the fusible alloys share rose to 28.8 percent of the total market from 25 percent in 1980.

U.S. industry stocks of bismuth at the end of 1981 were estimated at 454,952 pounds, 32.5 percent lower than on December 31, 1980. As of November 30, 1981 the U.S. stockpile goal for bismuth was 2.2 million pounds and the total inventory nearly 2.1 million pounds.

The sole U.S. primary producer of bismuth did not publish a bismuth price list in 1981. Starting October 12, 1981, the price quoted by a major foreign producer has been recorded. This price was $2.30 per pound throughout the fourth quarter of 1981. The dealer price, which started the year around $2.00 to $2.10 per pound, ended 1981 around $1.80 to $1.90 per pound, as world supply of bismuth substantially exceeded demand.

World Mine Production of Bismuth In Thousands of Pounds

Year	Romania (Ore)	Australia	Bolivia	Canada (Ore)	China (Ore)	France (Metal)	Rep. of Korea (Metal)	Yugoslavia (Metal)	Japan (Metal)	Mexico (Metal)	Peru (Metal)	Germany (Ore)	U.S.S.R. (Metal)	World Total
1969	180	441	1,338	579	550	137	245	226	1,531	1,336	1,500		110	8,289
1970	180	422	1,340	590	550	159	234	166	1,495	1,259	1,593		110	8,192
1971	180	564	1,504	271	550	170	214	202	1,790	1,257	1,415		120	8,330
1972	180	796	1,393	275	550	148	212	196	1,974	1,387	1,492		120	8,819
1973	180	1,001	1,297	71	550	126	218	121	1,900	1,290	1,262		120	8,205
1974	180	2,579	1,351	245	550	125	289	220	1,837	1,583	1,469		130	10,631
1975	180	1,861	1,348	345	550	123	249	122	1,436	1,003	1,354	23	130	8,776
1976	180	1,650	1,349	286	485	139	384	172	1,502	1,228	1,149	24	130	8,689
1977	180	2,054	1,435	363	500	110	293	163	1,538	1,607	1,290	24	140	9,704
1978	180	2,324	677	320	530	110	269	29	1,375	2,156	1,300	20	150	9,442
1979	180	2,200	22	301	570	130	192	50	1,070	1,660	1,323	22	160	7,880
1980[1]	180	2,000	20	380	570	130	200	160	700	1,650	1,150	20	160	7,300
1981[2]		2,000		400			300		700	1,600	1,200			7,400
1982														

[1] Preliminary. [2] Estimate. *Source: Bureau of Mines*

U.S. Salient Statistics of Bismuth In Thousands of Pounds

	Bismuth Consumed, By Uses									General Imports of Metallic Bismuth from				
Year	Experimental	Metallurgical Additives	Other Alloys	Fusible Alloys	Pharmaceuticals	Other Uses	Total Consumption	Consumer Stocks Dec. 31[3]	Exports of Metal & Alloys	Peru	Mexico	Japan	Total	Price[1] $ Per Pound
1969	.3	509.6	14.1	748.4	1,250.5	9.1	2,532.0	597.9	447.9	319.9	382.6		894.8	4.63
1970	.1	361.5	13.0	643.7	1,183.0	8.3	2,209.6	721.7	910.3	491.1	365.0		997.9	6.00
1971	26.2	362.5	17.4	514.2	724.6	3.8	1,648.7	1,107.2	71.2	191.7	251.6		848.7	5.26
1972	1.1	550.0	18.0	754.4	983.9	8.1	2,315.5	717.5	264.3	478.9	238.7		1,562.9	3.63
1973	—	830.9	15.2	932.6	1,117.6	9.8	2,906.2	540.8	151.1	488.8	357.8		2,683.7	4.92
1974	.3	668.9	21.4	748.6	838.1	6.6	2,284.0	596.8	329.9	459.2	292.5		1,893.7	8.41
1975	.7	416.2	26.0	401.9	553.3	7.9	1,406.0	451.3	128.9	140.6	161.8		1,331.2	7.72
1976	8.8	455.9	20.3	518.6	1,391.7	15.3	2,410.6	483.8	68.5	569.1	248.1		2,328.1	7.50
1977	.6	461.6	18.6	611.2	1,274.5	13.1	2,379.6	436.1	95.3	632.4	182.2		2,013.3	6.01
1978	.6	485.3	21.8	836.0	1,149.7	18.6	2,511.9	781.9	96.3	334.7	535.3		2,657.8	3.38
1979	3.2	703.8	22.0	721.0	1,248.7	28.5	2,727.2	629.7	427.8	648.7	604.8	185.5	2,167.3	3.01
1980[2]	1.2	467.9	26.5	650.9	1,115.6	26.7	2,288.8	674.0	128.7	619.1	860.4	138.4	2,217.4	2.64
1981[4]	1.0	269.1	25.9	661.3	1,316.6	20.0	2,293.0	455.0	78.7	859.3	724.1		2,436.2	2.30
1982														

[1] N.Y., average ton lots. [2] Preliminary. [3] Prior to 1970 data are for consumer & dealer. [4] Estimate.
Source: Bureau of Mines

Broilers

Production of federally inspected broiler meat for 1981 in the U.S. totaled about 11.98 billion pounds, slightly less than 1980 production of 12.05 billion pounds. The total number of broilers produced in 1981, however, was 4.15 billion birds, up 5 percent from the 1980 output. Prices on a live weight equivalent basis averaged 28.5 cents per pound in 1981, compared with 27.7 cents per pound in 1980. Civilian consumption of broiler meat in 1981 totaled 11.06 billion pounds versus 11.12 billion in 1980, and military use—34 million versus 37 million.

U.S. exports of chicken parts in 1981 increased 35 percent over the 1980 level, with the Far East and the Caribbean together taking 73 percent of the total. U.S. exports of whole broilers in 1981 were 17 percent above the 1980 figure, because large increases to Egypt, Iraq, and Venezuela more than offset declines to other countries. The United States is the leading exporter of chicken parts. However, competition for whole broiler exports, primarily from the EEC and Brazil, is intense.

Futures Markets

Broiler futures contracts are listed on the Chicago Mercantile Exchange and on the Chicago Board of Trade.

Average Wholesale Broiler Prices Delivered at Chicago[1] (Grade A) In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Avg.	9-City Weighted Avg.[3]	Hens[4] 8–16 Lbs. RTC (Chicago)[2]
1970	28.2	27.2	27.7	26.4	26.5	26.1	25.9	25.4	26.0	24.6	25.5	24.8	26.2	26.41	40.8
1971	26.1	27.1	26.7	26.4	28.2	29.1	30.0	27.6	27.0	25.4	24.4	24.1	26.8	27.16	41.0
1972	26.7	28.0	27.8	25.6	26.7	28.2	29.8	28.4	29.6	28.1	27.3	28.2	27.9	28.14	41.4
1973	32.5	36.0	40.9	44.2	41.0	41.3	47.1	60.0	48.1	39.9	34.8	36.6	41.6	42.17	59.6
1974	39.3	39.8	38.5	36.4	35.5	33.8	36.3	36.7	39.8	39.0	41.8	40.2	38.1	38.25	56.0
1975	42.8	40.9	40.2	39.8	42.3	46.9	50.9	49.6	49.6	47.2	45.6	41.7	44.8	45.07	63.3
1976	41.7	42.6	41.6	40.9	42.0	41.7	43.3	41.4	39.8	36.2	34.9	35.0	40.1	40.21	59.7
1977	38.7	41.4	42.0	41.1	41.8	42.7	43.8	41.9	40.6	38.8	36.9	35.9	40.5	40.81	53.1
1978	40.0	42.8	41.9	46.1	45.5	50.1	50.2	43.3	44.4	41.5	41.7	42.0	44.1	44.50	65.6
1979	45.4	48.7	47.1	46.7	49.0	45.3	41.4	39.0	39.3	36.4	42.7	45.5	43.9	44.40	67.3
1980	45.1	42.2	39.9	38.1	40.7	42.7	52.7	51.7	54.6	51.0	48.9	48.2	46.3	46.80	62.6
1981	48.5	49.1	47.2	43.2	45.5	48.2	48.7	46.2	42.8	43.4	42.1	39.0	45.3	46.30	59.7
1982															

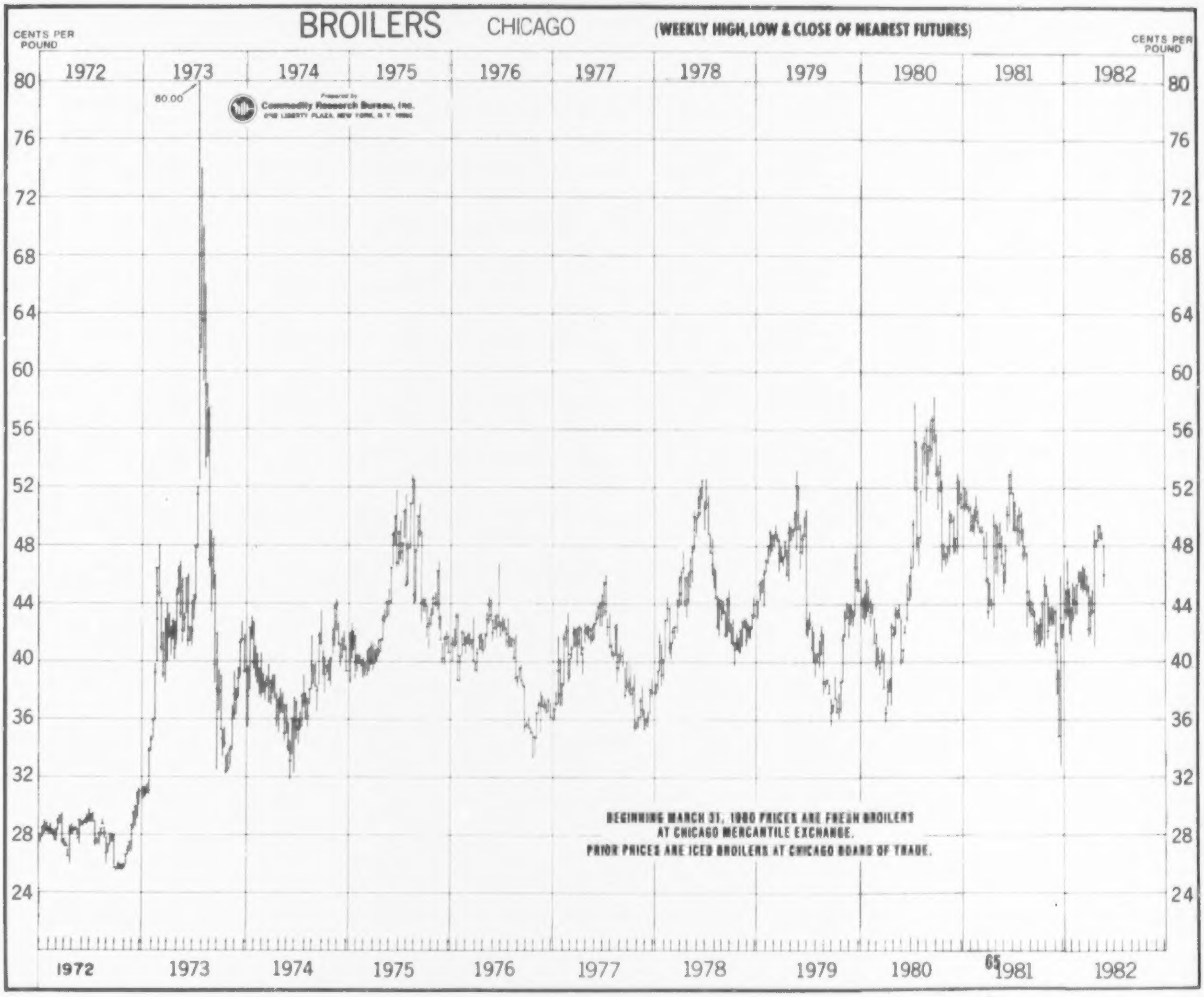
[1] Trucklots (U.S. & plant). [2] Ice packed, ready-to-cook. [3] In retail stores (urban areas), whole or cut-up ready to cook. [4] Prior to 1977 prices are for frying chicken. *Source: Bureau of Labor Statistics*

Broiler Supply and Prices in the United States

Year & Quarters	Federally Inspected Slaughter				Total Production RTC[2] (Mil. Lbs.)	Per Capita Consumption (Lbs.)	Prices (Cents/Lb.)	
	Number (Mil.)	Avg. Wt. (Lbs.)	Liveweight Pounds (Mil. Lbs.)	Certified RTC Wt. (Mil. Lbs.)			Farm	City
1976	3,253	3.81	12,408	8,987	9,067	40.4	23.1	40.2
1977	3,334	3.82	12,741	9,227	9,418	41.1	23.5	40.8
1978	3,517	3.88	13,656	9,883	10,129	43.7	26.4	44.5
I	831	3.88	3,226	2,327	2,385	10.3	24.2	41.8
II	909	3.87	3,519	2,547	2,610	11.4	28.7	47.6
III	922	3.84	3,540	2,567	2,630	11.3	28.0	46.6
IV	854	3.95	3,371	2,443	2,504	10.7	24.7	42.1
1979	3,843	3.93	15,111	10,916	11,219	47.7	26.0	44.4
I	907	3.90	3,541	2,551	2,623	11.2	28.5	47.5
II	1,011	3.90	3,936	2,844	2,922	12.6	28.2	47.7
III	1,009	3.92	3,951	2,855	2,934	12.5	23.6	40.8
IV	917	4.02	3,683	2,665	2,740	11.4	23.8	41.7
1980	3,915	3.93	15,409	11,175	11,334	47.0	27.8	46.8
I	950	3.96	3,759	2,739	2,786	11.7	25.6	43.0
II	1,016	3.96	4,027	2,940	2,989	12.3	23.5	41.1
III	991	3.83	3,796	2,776	2,817	11.7	31.8	53.3
IV	932	4.00	3,729	2,720	2,742	11.3	30.5	49.9
1981[1]	4,071	3.99	16,267	11,838	12,005	48.7	28.0	46.3
I	969	4.01	3,883	2,826	2,868	11.7	30.1	49.3
II	1,064	3.97	4,225	3,084	3,127	12.6	28.1	46.1
III	1,054	3.96	4,176	3,063	3,105	12.7	28.8	47.0
IV	965	4.05	3,908	2,865	2,905	11.7	25.2	42.1

[1] Preliminary. [2] Total production equals fed. inspec. slaughter plus other slaughter minus cut-up & further processing condemnation. [3] Forecast. *Source: Commodity Economics Division, U.S.D.A.*

BROILERS



Salient Broiler Statistics in the United States

	Commercial[2] Production		Average			Total Chickens[3] Supply & Distribution					Consumption		
						In Millions of Pounds					Civilian		
Year	Number Millions	Live-weight Mil. Lbs.	Live-weight Per Bird Lb.	Farm Price ¢ Lb.	Value of Production Mil. $	Commercial Broilers	Other Chickens	Total	Storage Stocks Jan. 1	Exports & Shipments	Military	Total	Per Capita in Lbs.
1969	2,789	10,048	3.60	15.2	1,531	7,175	732	7,907	97	166	88	7,640	38.4
1970	2,987	10,819	3.62	13.6	1,475	7,687	778	8,465	110	182	69	8,161	40.5
1971	2,945	10,818	3.67	13.8	1,487	7,724	792	8,516	163	202	75	8,253	40.5
1972	3,075	11,480	3.73	14.1	1,623	8,147	740	8,887	149	206	52	8,667	42.0
1973	3,009	11,220	3.73	24.0	2,690	8,025	736	8,761	111	203	47	8,476	40.7
1974	2,993	11,320	3.79	21.5	2,436	8,126	789	8,915	146	235	34	8,617	41.1
1975	2,950	11,096	3.76	26.3	2,915	8,127	696	8,823	175	273	39	8,572	40.6
1976	3,283	12,517	3.81	23.6	2,953	9,067	684	9,751	114	451	33	9,226	43.3
1977	3,400	12,993	3.82	23.5	3,067	9,418	700	10,118	155	481	26	9,627	44.8
1978	3,613	14,022	3.88	26.4	3,682	10,129	665	10,794	139	505	32	10,294	47.5
1979	3,951	15,519	3.93	26.0	4,031	11,219	731	11,950	102	597	33	11,280	51.6
1980[1]	3,964	15,541	3.93	27.8	4,304	11,334	757	12,091	142	781	38	11,278	51.1
1981[1]	4,071	16,267	3.99	28.0	4,555	12,005			136				
1982													

[1] Preliminary. [2] Beginning 1970 data are for the marketing year starting Dec. 1 through Nov. 30. [3] Ready-to-cook basis.
Source: Economic Research Service, U.S.D.A.

Burlap and Jute

Production of jute and kenaf in the major producduring the 1981/82 season (July/June), was esting countries of Bangladesh, India, and Thailand mated at 2,583,000 tonnes, 165,000 tonnes below the revised estimate of the 1980/81 level of 2,748,000 tonnes. This expected reduction in output was primarily due to acreage reductions in Bangladesh and India, which more than offset the modest increase in sown acreage in Thailand. The figures on 1979 output were revised to 2,776,000 tons, versus earlier estimates of 3, or 3,000 tonnes.

The overall decline in jute area and output in major producing countries was directly linked to the continued expansion of competitively priced synthetics and the price competitiveness of jute versus alternative crops such as rice and cassava. It therefore appeared likely that any future expansion in jute output would be due to the use of higher yielding varieties, as opposed to future acreage increases. Despite the production drop in the major producing countries, raw fiber exports were expected to be up about 20 percent in 1981/82 to 466,000 tons. Much of the increase in this export volume was expected to come from Bangladesh.

Production of raw jute in 1981/82 in Bangladesh was estimated at 910,000 tonnes, 14 percent below the previous season's level of 1,061,000 tonnes. Area, which has been declining steadily since 1978 due to the relative price advantage of rice versus jute, was forecast at 607,000 hectares, compared with 728,420 hectares the previous season.

India's jute and kenaf output in 1981/82 was projected at 1,423,000 tons, approximately 6 percent below the Indian Government's target level and 54,000 tonnes below last year's level. Jute production, which comprises the bulk of India's soft fiber production, was expected to reach 1,125,000 tonnes. The favorable 1981/82 production outlook was largely due to the good weather and growing conditions and the use of high-yielding jute varieties. The area devoted to jute and kenaf in 1981/82 was estimated at 1,200,000 hectares, approximately 100,000 hectares below last year's officially reported figure of 1,300,500 hectares. The 1980/81 crop was estimated at 1,477,000 tonnes, with jute comprising 1,170,000 tonnes and kenaf 307,000 tonnes.

A slight recovery in Thailand's output was anticipated for the 1981/82 kenaf and jute crops. Indications were that the crop would total 250,000 tonnes, compared to the 1980/81 crop of 210,000 tonnes. Although favorable weather and growing conditions was partially responsible for this recovery, lower cassava prices also prompted some farmers to switch to kenaf. Thus, kenaf plantings were estimated at 211,000 hectares and jute plantings at 16,000 hectares.

Bangladesh exports of raw jute and jute goods during 1980/81 totaled 851,986 tonnes, including 352,717 tonnes of raw jute and 499,251 tonnes of manufactured products. Although official trade data were not available, major destinations traditionally included the People's Republic of China, United Kingdom, USSR, Pakistan, Brazil, Belgium, and Mozambique. Jute continues to be Bangladesh's major foreign exchange earner, accounting for two-thirds of it export earnings. However, exports during the 10-year period from 1970/71 to 1979/80 earnings. However, exports during the 10-year period from 1970/71 to 1979/80 averaged 812,000 tonnes, 21 percent below the 1,024,000-tonne average of the previous 10 years. Competition from synthetics, industry disruption following the country's independence, and declining housing starts in the U.S. are among the factors contributing to the decline of the Bangladesh jute industry.

Exports from India of raw jute during 1980/81 (July–June), totaled 18,000 tonnes, compared with 9,000 tonnes in 1979/80. Approximately 10,620 tonnes were shipped to the USSR under a bilateral trade agrement. The remaining quantity of 7,380 tonnes was shipped to the United Kingdom, the EEC, and some African countries. Exports from India of jute goods, at 439,900 tonnes during 1980/81 (April–March) were down about 11 percent from the 1979/80 level of 492,400 tonnes.

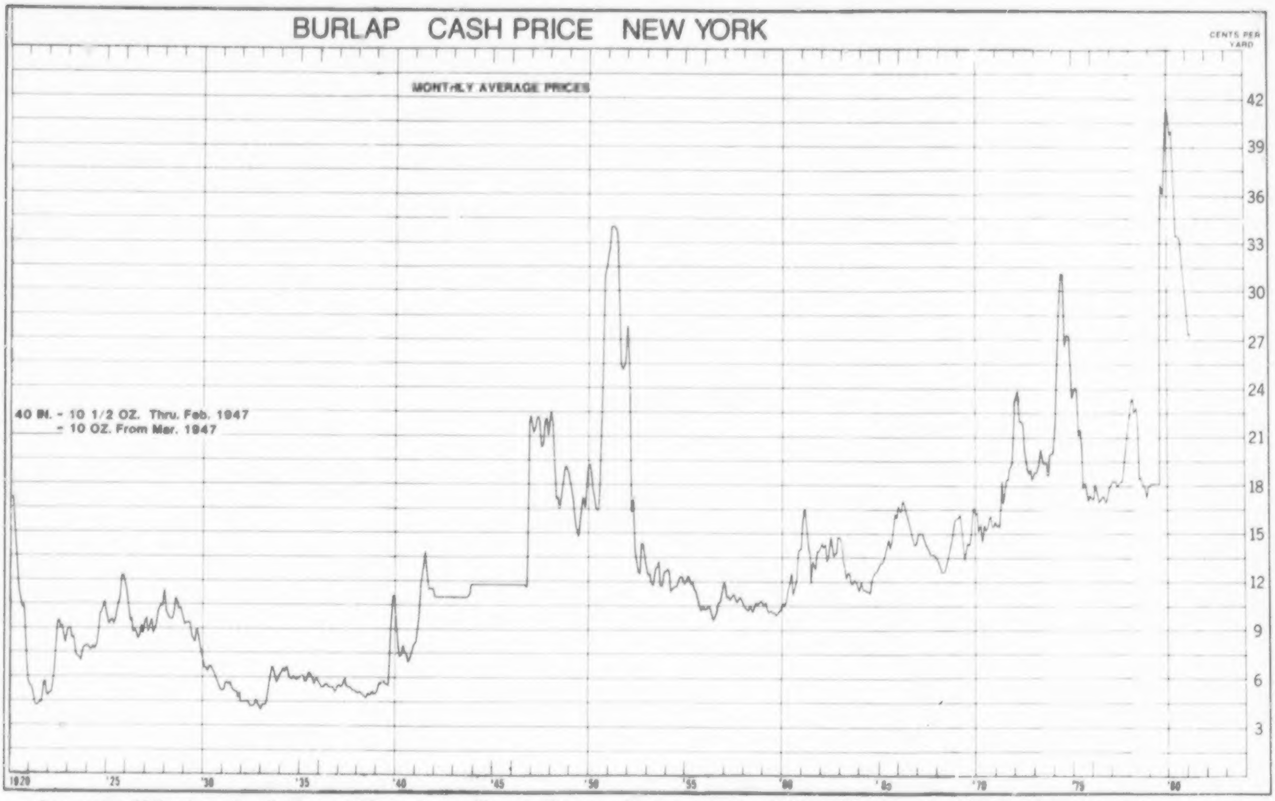
Jute and Kenaf Production In Thousands of Metric Tons[3]

Crop Year	Jute		Kenaf (Mesta)		Crop Year	Jute		Kenaf (Mesta)	
	Bangladesh[4]	India[4]	India[4]	Thailand[5]		Bangladesh[4]	India[4]	India[4]	Thailand[5]
1969–70	2,809	2,262	452	725	1975–6	782	800	265	308
1970–1	2,563	1,959	498	661	1976–7	877	964	314	183
1971–2	1,702	2,256	456	820	1977–8	972	961	320	246
1972–3	2,579	1,975	461	960	1978–9	1,169	—1,500—		320
1973–4[3]	1,080	1,116	266	570	1979–0[1]	1,210	—1,553—		260
1974–5	720	805	245	400	1980–1[2]	816	—1,440—		220

[1] Preliminary. [2] Estimate. [3] Data prior to 1973 are in MILLIONS OF POUNDS. [4] July–June year. [5] Sept.–Aug. year.

Source: Foreign Agricultural Service, U.S.D.A.

BURLAP AND JUTE



Average Wholesale Price of Raw Jute, Bang Tossa C., Landed, at New York In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1971	16.5	16.8	16.8	16.8	16.8	17.1	17.5	17.5	17.7	17.9	17.9	18.5	17.3
1972	N.A.	18.5	N.A.	N.A.	19.7	19.7	17.8	17.8	17.8	17.8	17.8	N.A.	18.4
1973	17.3	17.6	17.6	18.3	18.3	N.A.	18.9	18.8	18.8	18.8	18.2	18.2	18.3
1974	N.A.	N.A.	N.A.	N.A.	N.A.	19.5	19.5	21.5	N.A.	N.A.	25.8	27.8	22.8
1975	27.8	27.8	27.8	27.8	27.8	23.3	N.A.	23.3	N.A.	23.3	N.A.	20.3	25.5
1976	20.4	19.8	20.4	20.9	20.9	20.2	19.7	19.7	19.7	19.7	19.7	19.7	20.1
1977	20.2	20.2	21.4	21.4	21.4	N.A.	21.9	21.9	21.9	22.1	22.6	N.A.	21.5
1978	N.A.	N.A.	28.3	28.3	27.3	26.8	26.8	26.8	26.0	26.0	26.0	26.0	26.8
1979	26.0	26.0	26.0	25.8	26.0	26.0	25.8	N.A.	32.7	32.7	32.7	32.7	28.4
1980	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	29.0	28.5	29.0	29.0	28.8
1981	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0
1982	29.0	29.0											

Source: Bureau of Labor Statistics (0155-0231.01)

Average Wholesale Price of Burlap (40 Inch—10 Oz.) at New York In Cents Per Yard

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1971	15.4	15.5	15.3	18.3	16.9	18.1	18.4	18.4	19.0	19.3	19.4	23.2	18.1
1972	23.6	23.8	22.0	22.0	21.8	20.3	19.5	19.0	18.8	19.0	18.4	18.8	20.6
1973	18.8	18.9	19.3	20.3	19.9	19.4	19.4	19.4	18.7	18.7	20.0	20.0	19.4
1974	21.5	23.6	26.3	29.5	31.1	31.1	26.7	27.2	27.4	27.3	25.8	23.5	26.8
1975	24.0	24.1	23.8	21.1	21.5	20.6	17.9	18.2	17.6	17.1	17.4	N.A.	20.3
1976	17.2	18.1	17.9	17.4	17.0	17.2	17.4	17.2	17.0	17.4	17.8	18.0	17.5
1977	N.A.	18.3	18.3	18.0	N.A.	18.3	18.3	19.0	19.6	27.0	21.2	22.8	20.1
1978	23.2	23.4	22.6	22.9	18.4	18.5	18.0	18.0	18.0	17.3	18.0	18.0	19.7
1979	18.1	18.1	18.1	18.1	18.1	18.1	N.A.	35.4	36.7	36.0	40.3	41.5	27.1
1980	N.A.	39.8	40.0	38.5	N.A.	N.A.	N.A.	N.A.	33.5	33.5	N.A.	33.0	36.4
1981	N.A.	27.35	27.35	N.A.	29.0	N.A.	29.0	29.0	29.0	29.0	24.0	22.55	27.36
1982	23.5	23.40											

Source: Bureau of Labor Statistics (0337-0461.01)

Butter

U.S. 1981 butter production increased 8 percent from 1980 to 1,237 million pounds. With increased milk supplies for manufacturing considered likely in 1982, butter output was expected to increase. Commercial use of butter in 1981 declined 1 million pounds to 878 million pounds from 879 million in 1980. Domestic civilian consumption in 1981 decreased to 990 million pounds from 1,013 million in 1980.

The monthly retail prices of a 1-pound carton (quarter cuts) of butter averaged $1.99 for 1981, up 6.1 percent from 1980. After showing a January–December increase of 17 cents in 1980, the retail price flattened during 1981, and the December 1981 price was less than 1 cent above January's price.

The 1981 farm value of butter was estimated at $1.32 a pound, up 7 cents from 1980, compared with 14-cent increases in 1979 and 1980. The farmers' share was two-thirds of the retail price, about the same as in the 2 previous years. The slowdown in the rise in the farm value was the result of a stable support price for milk, large increases in milk supplies in 1980 and 1981, and weakening demand for dairy products. The estimated monthly prices per cwt. of milk used in butter had a maximum variation of only 10 cents during 1981 and, for the year, averaged $12.55 for 3.5 percent butter fat.

U.S. Government Price Support

The CCC purchase offers of butter, based on the milk support price, continued to attract large amounts of butter during 1981. These purchases totaled nearly 2 billion dollars in 1981, up 57.7 percent from 1980. Because of the high cost of the program and anticipated further increases in milk production, scheduled support price increases since October 1, 1980, have been rescinded before, or shortly after, the effective date. Therefore, the support price of milk was $13.10 per cwt. (3.67 percent butter fat) throughout 1981. For the 1982/83 marketing year the minimum support price was set at $13.25 per cwt.

In August 1981, the Commodity Credit Corporation (CCC) sold 220 million pounds of butter to the New Zealand Dairy Board (NZDB) at $1,550 a metric ton (70.3 cents a pound), loaded at the warehouse. Through January 1982 about 30 percent of the CCC sale was delivered and completion of deliveries was anticipated by mid-1982. The NZDB intended to convert most of the U.S. butter into butter oil for sale on world markets.

Shipments to New Zealand and a CCC sale of 66 million pounds to Poland, increased U.S. butter exports to 119 million pounds in 1981 from only 1 million pounds in each of the three previous years. However, 1981 ending stocks still increased by 41 percent to 429 million pounds from 304 million in 1980. For calendar 1981, USDA net removals of butter from commercial channels (CCC purchases) were up 37 percent from 1980, to 351.5 million pounds. Uncommitted CCC stocks of butter stood at 306.2 million pounds in March 1982 versus 367.1 million the previous year.

World Trends

World butter output for 1981, at 5.9 million metric tons, was 2 percent below 1980. Prospects for 1982 were for only a slight gain in production. Meanwhile, butter use was expected to decline slightly during 1982. Thus, 1982 world ending stocks were expected to increase, with most of the gain in the United States.

EEC butter output in 1982 was expected to approach 2 million tons, a 2 percent rise from 1981's reduced output. Exports by both France and Germany to third countries were expected to remain at high levels in 1982. New Zealand's butter production was expected to continue downward during the 1981/82 season, as more milk went into cheese manufacture. However, New Zealand butter exports could be up significantly as a result of larger sales to the Soviet Union.

Supply and Distribution of Butter in the United States In Millions of Pounds

	Supply					Distribution								93 Score Wholesale Prices	
	Production					Domestic Disappearance Civilian				Dept. of Agr.				$ Lb.	
Year	Creamery	Farm	Total	Cold Storage Stocks[1] Jan. 1[2]	Imports	Total	Per Capita —Lbs.—	Military	Exports & Shipments[4]	Jan. 1 Stocks[5]	Dec. 31 Stocks	Removed by U.S.D.A. Programs	Total Use	Calif. AA	Chi. AA
1969	1,118	8	1,126	117	2	1,079	5.4	50	27	103	64	188	1,156		
1970	1,137	6	1,143	89	2	1,061	5.3	45	9	64	99	246	1,115		
1971	1,144	3	1,147	119	2	1,040	5.1	32	99	99	71	292	1,171		
1972	1,102	—	1,102	97	2	1,017	4.9	23	54	71	96	234	1,094		
1973	919	—	919	107	56	999	4.8	9	17	96	23	98	1,025	.8397	—
1974	962	—	962	57	2	956	4.3	9	7	23	15	33	972	.8042	.6609
1975	984	—	984	49	2	1,012	4.4	9	3	15	5	63	1,024	.9729	.7941
1976	979	—	979	11	2	934	4.3	7	4	5	19	39	945	1.100	.9326
1977	1,086	—	1,086	47	2	941	4.0	5	4	19	151	222	950	1.1366	.9865
1978	994	—	994	185	2	966	4.1	3	5	151	192	112	974	1.2666	1.1058
1979	985	—	985	207	2	1,005	4.5	6	5	192	153	82	1,018	1.4327	1.2374
1980	1,145	—	1,145	178	2	1,013	4.5	4	4	153	268	257	1,021	1.6135	1.4079
1981[3]	1,237	—	1,237	304	3	990	4.3	4	121	268	382	352	1,115		
1982[3]				429						382					

[1] Commercial. [2] Includes stocks held by U.S.D.A. [3] Preliminary. [4] Includes U.S.D.A. shipments to Territories. [5] Includes butteroil. *Source: Department of Agriculture*

BUTTER

World (Total) Butter[1] Production In Thousands of Metric Tons

Year	Australia	Canada	China	Argentina	Denmark	France	Ireland	W. Germany	Netherlands	N. Zealand	India	Sweden	U.S.S.R.	South Africa	Un. Kingdom	United States
1975	161	129		40	139	556	86	521	204	230	451	56	1,231	26	48	445
1976	148	114	92	40	139	550	103	544	202	251	455	61	1,408	26	89	444
1977	118	113	94	30	131	551	105	535	179	263	457	61	1,500	21	134	493
1978	112	102	94	29	140	553	130	564	211	230	460	63	1,472	16	161	451
1979	105	98	95	32	131	596	132	568	202	255	475	65	1,409	18	161	447
1980[2]	84	102	95	29	113	627	123	578	179	255	480	66	1,373	17	169	519
1981[3]	80	105		29	105	615	117	540	180	247	485	63	1,315	16	190	558

[1] Factory (including creameries and dairies) & farm. [2] Preliminary. [3] Forecast. *Source: Foreign Agricultural Service, U.S.D.A.*

Production of Creamery Butter in Factories in the United States In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1975	100.5	90.8	98.1	103.2	101.9	88.3	69.2	57.7	58.0	68.2	64.0	83.8	983.8
1976	92.5	85.0	90.0	87.0	91.4	83.9	71.5	65.1	64.0	78.1	77.6	92.5	978.6
1977	105.5	95.4	98.4	99.9	103.2	93.0	81.8	77.8	75.0	84.5	81.5	89.5	1,086
1978	107.4	95.5	98.2	97.2	97.6	85.1	71.4	63.2	64.0	70.6	66.5	77.7	994.3
1979	98.4	86.7	89.8	92.4	99.2	83.0	72.5	64.3	60.5	78.0	75.8	84.0	984.6
1980	105.7	99.9	101.1	112.2	116.6	93.9	83.7	75.3	77.0	91.4	84.7	103.6	1,145
1981[1]	121.3	110.1	116.7	116.9	116.2	96.6	84.1	85.0	86.3	100.5	94.2	108.9	1,237
1982[2]	128.3	116.8											

[1] Preliminary. [2] Estimate. *Source: Crop Reporting Board, U.S.D.A.*

Commercial Disappearance of Creamery Butter in the U.S. In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1975	92.9	70.4	91.4	84.9	78.1	76.6	72.7	77.9	66.5	78.6	71.4	85.1	947.7
1976	94.5	77.2	74.8	74.6	66.5	72.8	70.0	64.0	77.5	81.3	82.6	82.2	919.0
1977	71.9	53.9	83.6	65.0	56.3	44.8	71.6	72.8	89.1	81.5	74.0	94.3	859.8
1978	68.1	65.9	92.0	79.2	61.0	77.5	68.7	69.8	83.8	72.8	77.4	87.4	903.5
1979[1]	83.1	78.3	88.5	70.7	64.2	68.1	72.5	66.2	63.4	78.4	84.4	78.7	895.0
1980[1]	75.0	86.1	88.8	47.7	54.2	59.4	73.2	78.8	77.3	66.3	78.1	93.5	878.8
1981[1]	66.3	49.5	74.2	70.8	70.5	73.7	66.6	75.1	87.4	57.0	100.8	87.1	877.8

[1] Preliminary. *Source: Economic Research Service, U.S.D.A.*

Cold Storage Holdings of Creamery Butter in the U.S., on First of Month In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1975	49.2	53.7	61.3	60.5	66.7	85.1	99.6	97.8	78.9	39.6	27.1	15.1
1976	10.9	9.3	16.5	31.1	44.0	69.5	80.9	83.0	82.3	68.1	60.7	47.3
1977	47.1	67.6	94.2	106.3	128.3	163.8	197.1	209.0	208.6	203.3	195.4	193.4
1978	184.9	195.7	215.9	235.8	246.2	264.6	282.0	297.7	284.6	266.7	251.8	228.9
1979	206.9	206.7	214.7	210.1	218.2	239.1	260.1	257.3	238.5	218.0	200.4	182.1
1980	177.8	191.0	205.6	217.2	238.1	281.7	295.9	308.0	306.4	302.9	301.6	302.7
1981[1]	304.6	332.2	372.3	407.4	450.4	473.6	507.5	515.5	515.6	489.5	470.0	451.1
1982[1]	429.2	430.3	440.4	445.3								

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

Wholesale Price of 92 Score Creamery (Grade A, Bulk) Butter at Chicago In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1975	66.8	68.1	68.1	69.2	69.2	69.2	76.6	83.6	87.9	93.0	97.3	103.6	79.4
1976	86.1	80.9	86.0	89.5	89.9	95.0	105.8	106.2	92.4	90.8	90.8	90.8	92.0
1977	90.8	90.3	92.7	100.1	100.7	100.7	100.7	100.7	100.7	100.7	100.9	101.5	98.4
1978	100.7	100.7	101.2	105.2	106.7	106.7	107.9	116.7	115.8	115.6	121.1	118.8	109.8
1979	111.3	111.3	114.1	120.7	121.8	121.8	122.7	128.7	127.8	128.8	130.0	130.2	122.4
1980	130.2	130.3	130.4	134.0	136.9	139.0	139.3	144.5	145.1	147.1	147.6	147.7	139.3
1981	147.2	147.2	147.2	147.2	147.3	147.5	147.9	148.0	148.5	150.6	148.9	148.1	148.0
1982	147.5												

Source: Economic Research Service, U.S.D.A.

Cadmium

Cadmium is a relatively rare element that is recovered as a byproduct of zinc ore processing, and is used in its metallic form for plating and alloying. Cadmium compounds are widely used in pigments, plastics, and batteries.

U.S. refinery production of cadmium metal in 1981 was slightly larger than in 1980, but fell short of satisfying domestic demand. Production of cadmium sulfide was up 13 percent in 1981, but production of other compounds was 2 percent lower than in 1980.

Imports of cadmium metal in 1981, increased about 18 percent from the 1980 level, to make up for the shortfall in domestic production. The major sources of U.S. imports of cadmium metal in 1981 (in order of importance) were Canada, Australia, the Republic of Korea, and West Germany.

U.S. apparent consumption of cadmium in 1981, was close to 20 percent higher than in 1980 according to preliminary data of the Bureau of Mines, U.S. Department of the Interior. Domestic shipments of cadmium metal in 1981 were 18 percent above the year earlier level and shipments of compounds were up about 15 percent. Cadmium usage in batteries, plastic stabilizers, and pigments continued to be the fastest growing applications. A major potential use is in cadmium sulfide solar energy cells. The estimated consumption pattern in 1981 was: plated hardware—34 percent; batteries—22 percent; transportation—17 percent; pigments—13 percent; plastics and synthetic products—11 percent; other uses—3 percent.

U.S. stocks of cadmium metal held by metal producers at the end of 1981 were 10 percent above the year earlier level. Stocks held by compound producers were 36 percent higher than at the end of 1980.

The domestic producer price of cadmium began 1981 at $2.50 per pound, declined to the $1.60 to $2.00 range in early October, and then dropped to $1.40 per pound in late December 1981. U.S. dealer prices for cadmium, which began the year at $2.00 per pound, declined to as low as $1.25 per pound in the final quarter of 1981 as business activity continued to contract.

World Smelter Production of Cadmium Metal In Metric Tons[5]

Year	Australia[3]	Belgium	Canada[3]	France	W. Germany	Italy	Japan	Mexico[3]	Norway	Poland	Un. King.	U.S.S.R.	United States[4]	Zaire	World Total
1969	1,259	2,092	2,124	1,153	1,746	930	6,095	462	198	925	541	5,100	12,646	661	38,749
1970	1,355	2,407	1,845	1,164	2,282	937	5,403	591	216	990	701	5,200	9,465	699	36,454
1971	1,234	2,088	1,568	1,276	2,162	772	5,898	424	202	880	578	5,300	7,930	578	34,014
1972	1,586	2,536	2,450	1,262	2,014	918	6,678	410	192	780	530	5,400	8,290	652	36,776
1973	1,494	2,528	3,084	1,336	2,692	876	6,988	402	194	780	692	5,500	7,502	612	37,850
1974	1,588	2,300	2,740	1,420	2,952	1,166	6,674	1,162	198	780	618	5,700	6,666	598	38,082
1975	1,210	2,094	2,628	1,004	2,244	902	5,858	1,292	104	780	606	5,800	4,386	582	33,586
1976[5]	649	1,200	1,314	532	1,275	436	2,500	710	80	750	190	2,700	2,047	266	16,998
1977	671	1,400	1,185	790	1,336	449	2,844	908	97	754	295	2,750	1,999	246	18,250
1978	754	1,164	1,151	689	1,182	378	2,531	897	120	761	291	2,800	1,653	186	17,332
1979	804	1,440	1,209	792	1,266	527	2,597	850	115	733	424	2,850	1,823	212	18,592
1980[1]	960	1,400	1,080	800	1,200	500	2,200	800	110	760	400	2,850	1,578	200	17,720
1981[2]	1,050	1,000	1,200				2,100	800					1,580		17,400
1982															

[1] Preliminary. [2] Estimate. [3] Refined metal. [4] Primary & secondary metal. [5] Data prior to 1976 are in THOUSANDS OF POUNDS. *Source: Bureau of Mines*

Salient Statistics of Cadmium in the United States In Metric Tons[6] of Contained Cadmium

Year	Net Import Reliance as a % of Apparent Consumption	Production				Imports (for Consumption)			Price[5] $ per lb.	Exports Cadmium Metal, Alloys, Dross,		Consumption[4]	Stocks, Dec. 31		
		Primary											Industry		
		Metallic	Producers Shipments	Producers Value Mil. $	Cadmium Sulfide[3]	Metallic	Flue Dust[3]	Total		Flue Dust	Value $ Ths.		Metallic	Compounds	Distributors
1969		12,646	12,978	40.6	2,439	1,078	1,115	2,193		1,085	3,254	15,062	1,432	722	
1970		9,465	6,848	24.2	2,137	2,492	1,111	3,603		373	997	9,062	3,837	944	
1971		7,930	7,774	9.8	2,236	3,498	1,112	4,610	1.92	66	172	10,872	4,297	975	
1972		8,290	10,480	19.0	2,714	2,422	740	3,162	2.56	1,018	2,363	12,626	2,342	982	
1973		7,502	8,608	23.9	2,824	3,896	348	4,244	3.64	306	598	12,534	1,530	1,122	
1974		6,666	6,500	21.4	2,170	3,970	332	4,302	4.09	62	238	12,100	1,396	330	
1975[6]	41	1,990	742	4.2	895	2,375	314	2,689	3.36	180	589	3,055	1,881	121	
1976	64	2,047	2,707	10.5	729	3,094	223	3,317	2.66	229	713	5,381	1,242	148	
1977	51	1,999	1,837	7.1	639	2,332	13	2,345	2.96	107	316	3,818	1,452	72	255
1978	63	1,653	1,957	5.9	698	2,881	—	2,881	2.45	326	864	4,510	1,152	45	296
1979	64	1,823	2,468	9.5	1,494	2,572	—	2,572	2.76	211	550	4,928	517	52	327
1980[2]	55	1,578	1,271	5.2	801	2,617	—	2,617	2.84	236	464	3,532	841	39	442
1981[1]	63	1,600	1,529		908	3,090	—	3,090	1.89	239		4,228	928	53	500

[1] Estimate. [2] Preliminary. [3] Cd content. [4] Apparent Primary cadmium in all forms. [5] Producer to consumer in 1 to 5 ton lots, average. [6] Data prior to 1976 are in THOUSANDS OF POUNDS. *Source: Bureau of Mines*

Castor Beans

World production of castor beans for the 1981/82 season was forecast by the Foreign Agricultural Service of the USDA in April 1982 at 920,000 tonnes, considerably above the estimated 1980/81 total of 817,000 tonnes, but only slightly above 1979/80 production of 878,000 tonnes.

World production of castor oil in the 1981/82 season was forecast by the USDA in April 1982 at 393,000 tonnes versus estimated production of 349,000 tonnes in the 1980/81 season and 375,000 tonnes in 1979/80.

The United States, which continues to be the world's largest market for castor oil (primarily for industrial products) imported 40,390 tonnes of castor oil in calendar year 1981, about 6 percent less than the 42,731 tonnes imported in 1980. U.S. consumption of castor oil in selected products totaled 86.5 million pounds in the 1980/81 season (October–September), about 4 percent below the 89.6 million pounds consumed in the 1979/80 season. U.S. consumption of castor oil in the November 1981–February 1982 period totaled about 22.9 million pounds, also about 4 percent less than in the corresponding 1980/81 period, apparently reflecting the reduced level of industrial activity.

Factory and warehouse stocks of castor oil in the United States at the end of the 1980/81 season on September 30, 1981 totaled 8.1 million pounds versus 14.6 million at the end of the preceding season. U.S. stocks of castor oil at the end of February 1982 amounted to about 11.1 million pounds, compared with 22.2 million pounds a year earlier.

World Production of Castorbeans In Thousands of Metric Tons

Crop Year	China	Brazil	Ecuador	Ethiopia	India	Romania	Iran	Israel	Mexico	Pakistan	Thailand	U.S.S.R.	Rep. of So. Afr.	Sudan	World Total
1971	72	273	25	13	154	10	8	8	7	13	42	53	5	19	744
1972	66	437	22	13	175	10	7	8	7	13	42	89	5	17	943
1973	71	558	26	13	229	10	5	8	3	13	42	76	5	14	1,117
1974	67	573	16	11	229	10	4	8	4	13	32	74	5	15	1,088
1975	70	353	13	10	210	12	4	8	8	14	48	52	5	16	858
1976	70	222	10	10	143	5	4	8	6	8	43	41	5	2	614
1977–8	79	277	10	11	217	5	4	8	6	19	37	45	5	2	765
1978–9	98	388	11	11	229	6	4	8	6	19	37	43	5	9	918
1979–0	110	325	10	10	233	6	4	8	4	19	26	62	5	9	876
1980–1[1]	120	320	11	10	275	6	3	8	6	20	22	59	5	10	814
1981–2[2]												67			935

[1] Preliminary. [2] Estimate. *Source: Foreign Agricultural Service, U.S.D.A.*

Salient Statistics of Castor Oil in the United States In Millions of Pounds

Year Beginning Oct. 1	Supply			Disappearance								No. 1 Braz. N.Y.[2] ¢ Lb.
					Domestic							
	Imports	Stocks Oct. 1	Total	Exports	Per Capita (in Lbs.)	Total	Paint & Varnish	Fatty Acids	Resins & Plastic	Lubricants & Oils	Other Inedible	
1970–1	85.3	118.9	204.2	—	0.53	110.1	5	13	1	6	85	15.5
1971–2	82.5	94.0	176.5	—	0.66	137.9	30	22	13	6	67	17.2
1972–3	87.6	38.6	126.2	—	0.54	113.9	5	6	11	6	85	23.3
1973–4	123.0	12.3	135.3	—	0.55	117.1	7	3	8	6	93	52.6
1974–5[1]	86.2	18.2	104.5	—	0.41	88.6	—	—	5	6	79	44.0
1975–6[1]	116.2	15.9	132.1	—		92.1						31.5
1976–7[1]	117.7	44.5	162.2	—		106.6						33.3
1977–8[1]	264.3	31.0	295.3			104.7						43.4
1978–9[1]		17.5										41.8
1979–0[1]												44.9
1980–1[1]												34.5

[1] Preliminary [2] Tanks, imported—calendar year. *Source: Economic Research Service, U.S.D.A.*

Monthly Average Wholesale Prices of Castor Oil[1] at New York In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1976	29.00	27.50	27.50	27.50	27.50	31.50	35.00	38.50	39.00	39.00	39.00	39.00	33.33
1977	39.00	39.00	40.00	40.00	45.00	45.00	45.00	45.00	45.00	46.00	46.00	46.00	43.42
1978	46.10	46.50	46.50	46.30	46.20	40.30	39.40	37.90	37.90	37.90	37.90	37.90	41.73
1979	37.90	37.90	37.80	37.80	37.80	38.40	41.30	50.90	53.10	54.10	56.00	56.00	44.92
1980	55.70	55.70	55.80	55.60	55.00	52.00	51.00	49.80	48.00	46.50	45.30	46.00	51.37
1981	46.70	45.90	45.00	45.00	44.60	44.10	43.50	44.30	43.70	43.30	43.30	43.30	44.39
1982	42.80	43.30	43.30										

[1] Average wholesale, TANK CARS, IMPORTED BRAZIL. *Source: Foreign Agricultural Service, U.S.D.A.*

Cattle and Calves

Cattle slaughter in the U.S. increased 3 percent in 1981. Cow and heifer slaughter rose 5 percent, while steer slaughter expanded 2 percent. Nonfed slaughter increased again in 1981, while fed slaughter declined by less than 1 percent. Fed slaughter remained the dominant class, representing 68 percent of the total. This proportion was down from 71 percent in 1980 and 76 percent in 1979. Cattle slaughter as a proportion of the beginning of the year's inventory remained at the 33 percent recorded in 1980. Cow slaughter also remained at 13 percent of the January 1 inventory. Both figures were well below the historical average slaughter rates recorded during the expansion phase of a cattle cycle.

While the expansion phase of the cattle cycle continues, growth is slower than previously expected. The 1981 cattle inventory was revised downward from 115 million to 114.3 million head. In addition, the size of the 1980 calf crop was revised downward by 350,000 head to 45 million. The January 1, 1982, estimate of the 1981 calf crop was 44.7 million head, a 900,000 decline from the July 1, 1981, midyear estimate. The January 1, 1981, estimate of the cow herd was revised downward by 270,000 to 49.6 million head, with nearly all the decrease in beef cows.

The January 1, 1982, cattle inventory was 115.7 million head, a 1-percent rise from a year earlier and 4 percent above 1980. Beef cow numbers rose 1 percent from 1981 and 6 percent over 1980. The number of heifers being saved for possible beef herd expansion increased by 8 and 12 percent, compared with 1981 and 1980, respectively. The proportion of replacement heifers entering the cow herd declined from 87 percent in 1980 to 78 percent in 1981.

Returns to cow-calf enterprises in all regions were poor. This situation was magnified for producers in the Southeast by drought conditions which continued until late 1981. It appears that reduced supplies and poor quality of forage due to the prolonged drought in 1980–81 may have had a large impact on the 1981 outcome. Heifers bred in the spring of 1980 calved and entered the herd in relatively large proportions. Greatest impact of the drought appears to have been on the heifers to be bred in late fall 1980, which normally would have calved in the second half of 1981. The proportion of heifers entering the herd in the second half of the year was the lowest since data collection was started in 1973.

Given the excellent forage conditions in 1981, an increase in the calf crop was expected in 1982. The 1981 calf crop was 90 percent of the January 1, 1981 cow inventory, compared with 94 percent in 1980. A calf crop that is above 90 percent of the cow herd at the beginning of the year is typical of the expansion phase of the cycle when a larger number of heifers calve and enter the cow herd. In 1982, 91 percent of the 50.4 million cows in inventory on January 1 calving would provide a 45.8-million-head calf crop, a 5-percent increase from 1981.

Futures Markets

Live beef cattle futures and feeder cattle futures are traded on the Chicago Mercantile Exchange, and a smaller live cattle futures contract is traded on the MidAmerica Commodity Exchange in Chicago.

World Cattle and Buffalo Numbers In Millions of Head

Year	Argentina	Australia	Brazil	Canada	China	Colombia	France	W. Germany	India	Turkey	Mexico	South Africa	USSR	Un. Kingdom	United States	World Total[2]
1971	49.8	24.4	81.1	12.2	92.6	20.5	21.7	14.0		13.9	25.1	10.0	99.2	12.4	114.6	1,245
1972	52.3	27.4	85.1	12.3	92.7	21.0	21.7	13.6		13.7	26.4	11.6	102.4	12.9	117.9	1,268
1973	54.8	29.1	86.1	12.6	92.8	22.1	22.6	13.9		14.1	26.8	11.7	104.0	13.8	121.5	1,288
1974	58.0	30.8	88.1	13.2	92.9	23.0	23.9	14.4		14.3	27.5	12.3	106.3	14.8	127.8	1,311
1975	59.6	32.8	94.0	14.0		23.0	24.3	14.4		14.4	28.7	12.3	109.1	14.8	132.0	N.A.
1976	61.5	33.4	92.0	14.0		23.8	23.6	14.5	240.5	14.8	28.9	12.8	111.0	13.9	128.0	963
1977	61.9	31.5	91.0	13.7		24.3	23.3	14.5	241.5	15.2	29.3	13.1	110.3	13.7	122.8	947
1978	61.8	29.3	89.0	12.9		25.2	23.4	14.8	242.7	15.6	29.7	13.0	112.7	13.5	116.4	941
1979	60.2	27.1	90.0	12.3		26.2	23.5	15.0	242.5	16.0	29.3	13.2	114.1	13.5	110.9	936
1980	58.9	26.2	91.0	12.4		27.2	23.6	15.1	241.0	16.6	29.5	12.6	115.0	13.3	111.2	937
1981[2]	58.7	25.2	93.0	12.5	95.0	27.8	23.6	15.1	241.5	17.0	29.6	12.5	115.1	13.1	115.0	942
1982[1]	57.7	24.7	93.0	12.7		28.7	23.6	15.0	242.0	17.3	29.9		115.3	13.1	118.5	947

[1] Estimate. [2] Preliminary. *Source: Foreign Agricultural Service, U.S.D.A.*

Commercial Slaughter of Cattle and Calves in the United States[2] In Thousands of Head

	Cattle		Calves				Cattle		Calves		
Year	Federally Inspected	Total[2]	Federally Inspected	Total[2]	Total[2] Cattle and Calves	Year	Federally Inspected	Total[2]	Federally Inspected	Total[2]	Total[2] Cattle and Calves
1971	31,419	35,585	2,806	3,689	39,274	1977	38,717	41,856	4,696	5,517	47,373
1972	32,267	35,779	2,421	3,053	38,832	1978[1]	36,948	39,552	3,620	4,170	43,722
1973	30,521	33,687	1,808	2,249	35,936	1979[1]	31,504	33,678	2,499	2,824	36,502
1974	33,319	36,812	2,355	2,987	39,799	1980[1]	31,642	33,807	2,294	2,588	36,395
1975	36,904	40,911	3,894	5,209	46,120	1981[1]	32,798	34,900	2,475	2,796	37,696
1976	38,992	42,654	4,438	5,350	48,004	1982					

[1] Preliminary. [2] Includes other wholesale and retail slaughter. *Source: Crop Reporting Board, U.S.D.A.*

CATTLE AND CALVES

Cattle Supply and Distribution in the United States In Thousands of Head

Year	Cattle & Calves on Farms Jan. 1	Imports	Calves Born	Total Supply	Livestock Slaughter—Cattle and Calves: Commercial: Federally Inspected	Other[2]	All Commercial	Farm	Total Slaughter	Deaths on Farms	Exports	Total Disappearance
1972	117,862	1,186	47,682	166,730	34,688	4,144	38,832	503	39,335	5,126	104	44,565
1973	121,539	1,039	49,194	171,772	32,329	3,607	35,936	570	36,506	6,487	273	43,266
1974	127,778	568	50,873	179,229	35,674	4,125	39,799	729	40,528	6,110	204	46,842
1975	132,028	389	50,183	182,600	40,798	5,322	46,120	750	46,870	6,992	196	54,058
1976	127,980	984	47,384	176,348	43,430	4,574	48,004	722	48,726	5,190	205	54,121
1977	122,810	1,133	45,931	169,974	43,413	3,960	47,373	700	48,073	6,000	107	54,180
1978	116,375	1,253	43,818	161,446	40,568	3,154	43,722	550	44,272	5,680	122	50,074
1979	110,864	732	42,603	154,199	34,342	2,473	36,474	430	36,932	5,600	66	42,594
1980	111,192	681	44,998	156,871	33,936	2,458	36,395	400	36,795	5,450	66	42,311
1981[1]	114,321	659	44,714	159,694	35,273	2,423	37,696	417	38,113	5,112	88	43,313
1982[1]	115,691											

[1] Preliminary. [2] Wholesale and retail. *Source: Economic Research Service, U.S.D.A.*

Number of Cattle & Calves on U.S. Farms & Ranches on Jan. 1, by Classes In Thousands of Head

Year	Total Cattle & Calves	Cows & Heifers That Have Calved: Beef	Milk	Total	Heifers 500 lbs. & Over: For Beef Cow Replacement	For Milk Cow Replacement	Other Heifers	Total	Steers 500 lbs. & Over	Bulls 500 lbs. & Over	Under 500 lbs.
1973	121,539	40,918	11,624	52,541	7,436	3,874	6,434	17,743	16,555	2,466	32,229
1974	127,788	43,008	11,286	54,293	8,226	3,942	6,821	18,988	17,802	2,645	33,942
1975	132,028	45,472	11,211	56,682	8,879	4,095	6,509	19,482	16,373	2,987	36,302
1976	127,980	43,888	11,087	54,974	7,196	3,958	7,393	18,546	17,083	2,845	34,531
1977	122,810	41,389	11,035	52,424	6,529	3,888	8,057	18,473	16,885	2,665	32,363
1978	116,375	38,809	10,939	49,748	5,845	3,896	7,970	17,710	16,779	2,544	29,595
1979	110,864	37,062	10,790	47,843	5,527	3,932	7,445	16,903	16,442	2,403	27,263
1980	111,192	37,086	10,779	47,865	5,939	4,158	7,130	17,226	16,019	2,492	27,590
1981[1]	114,321	38,726	10,860	49,586	6,136	4,345	7,285	17,766	15,519	2,547	28,904
1982[1]	115,691	39,364	10,998	50,362	6,623	4,530	7,187	18,340	15,509	2,619	28,862

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

Condition[1] of Pasture and Range Feed in the United States, on First of Month In Percent of Normal

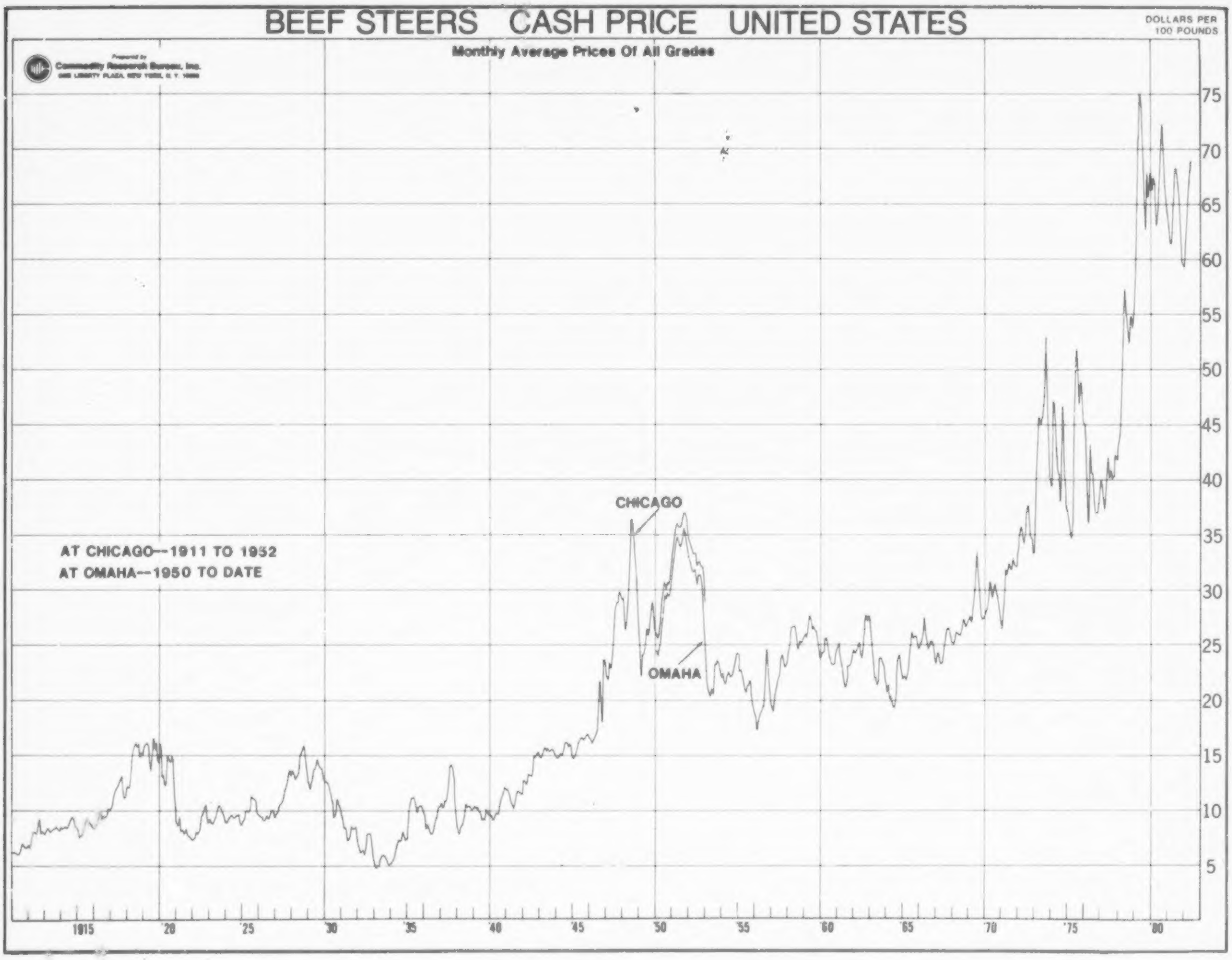
Year	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1973	86	87	87	84	82	80	82	83	81
1974	79	81	84	82	66	71	75	70	71
1975	77	76	86	88	80	76	80	77	74
1976	73	79	77	75	70	61	63	66	64
1977	68	76	74	68	64	71	76	75	72
1978	68	75	85	85	77	75	77	73	70
1979	75	84	87	86	84	86	81	77	75
1980	76	80	81	78	60	61	63	65	63
1981	70	79	80	84	82	82	80	80	78

[1] Indicates current supply of feed for grazing on non-irrigated pastures & ranges relative to that expected from existing stands under very favorable weather conditions. [80 & over, good to excellent; 65–79, poor to fair; 50–64, very poor; 35–49, severe drought; under 35, extreme drought.] *Source: Statistical Reporting Service, U.S.D.A.*

Cattle & Calves on U.S. Farms on January 1, by Leading States In Thousands of Head

Jan.1	Calif.	Colo.	Ill.	Iowa	Kans.	Minn.	Miss.	Mo.	Mont.	Nebr.	Ohio	Okla.	So. Dak.	Texas	Wis.
1972	4,662	3,610	3,400	7,773	6,757	3,998	2,322	5,238	3,165	6,780	2,113	5,441	4,408	13,464	4,241
1973	4,710	3,756	3,240	7,770	6,800	4,038	2,415	5,550	3,197	6,865	2,134	5,660	4,496	15,100	4,283
1974	5,250	3,744	3,250	7,660	6,990	4,240	2,610	6,330	3,380	7,410	2,150	6,020	5,000	16,250	4,400
1975	5,200	3,375	3,200	7,350	6,400	4,430	3,000	6,800	3,340	6,900	2,350	6,500	4,950	16,600	4,640
1976	5,000	3,250	3,400	7,500	6,450	4,430	2,723	6,600	3,150	6,550	2,305	6,400	4,500	15,600	4,550
1977	4,750	3,030	3,200	7,650	6,400	4,000	2,670	6,400	2,980	6,450	2,205	5,650	3,650	15,800	4,275
1978	4,430	3,180	2,950	7,800	6,000	3,700	2,130	6,000	2,680	6,500	2,025	5,900	3,925	14,500	4,100
1979	4,700	3,090	2,850	7,200	6,200	3,650	1,790	5,550	2,607	6,450	1,750	5,300	3,830	13,900	4,100
1980	4,550	2,975	2,700	7,150	6,200	3,750	1,810	5,400	2,645	6,400	1,825	5,500	4,010	13,200	4,280
1981	4,760	3,125	2,650	7,350	6,450	3,800	1,800	5,550	2,675	6,850	1,815	5,400	4,100	13,700	4,550
1982[1]	5,000	3,025	2,800	6,850	6,000	3,880	1,950	5,400	2,900	7,250	1,900	5,800	3,900	13,700	4,450

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

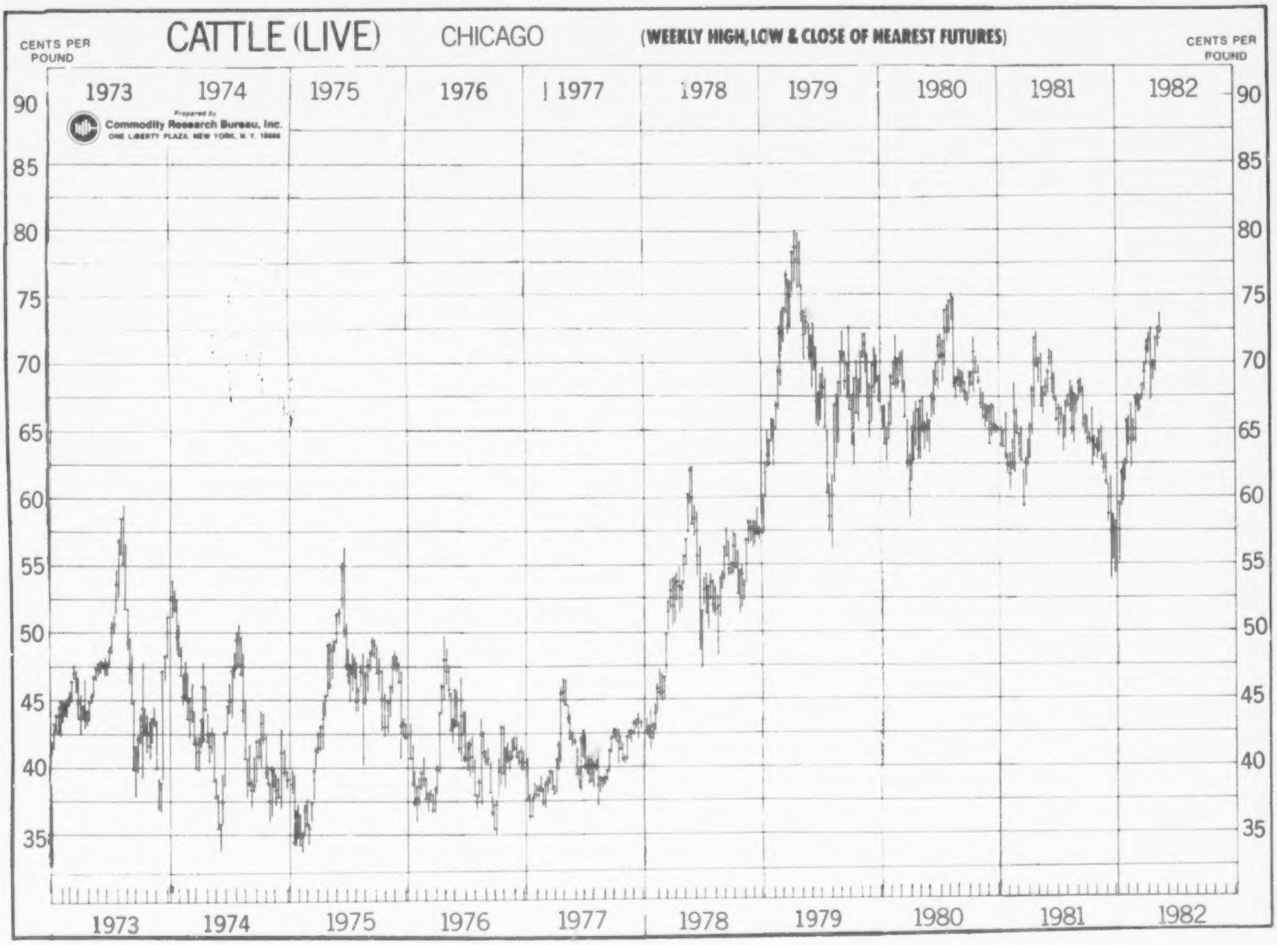


Number of Cattle and Calves on Feed[2] on Jan. 1 in the United States In Thousands of Head

Jan. 1	Arizona	California	Colorado	Illinois	Indiana	Iowa	Kansas	Minnesota	Missouri	Nebraska	Ohio	South Dakota	Texas	Wisconsin	Total U.S.
1969	442	968	711	786	349	2,213	766	556	442	1,430	324	361	1,075	154	12,534
1970	510	1,031	795	755	349	2,213	892	589	402	1,477	318	361	1,417	146	13,190
1971	524	1,001	888	649	314	1,992	916	548	342	1,422	308	339	1,480	150	12,770
1972	539	1,045	983	662	327	2,112	1,100	537	373	1,550	320	363	1,781	144	13,912
1973	655	1,181	1,050	585	276	1,922	1,250	494	310	1,581	300	378	2,245	143	14,432
1974	609	1,209	930	530	263	1,715	1,160	464	250	1,525	280	381	2,205	136	13,642
1975	319	688	755	500	250	1,200	920	380	200	1,160	290	345	1,327	135	10,167
1976	510	960	925	630	285	1,530	1,340	430	260	1,390	320	365	1,882	168	12,943
1977	361	812	915	620	290	1,520	1,315	340	255	1,580	325	370	1,710	130	11,948
1978	422	845	1,020	650	315	1,690	1,400	400	220	1,700	295	365	1,850	130	12,811
1979	490	796	1,080	510	280	1,620	1,440	400	180	1,800	225	340	2,000	106	12,681
1980	420	764	960	460	250	1,390	1,270	390	120	1,680	180	350	1,970	112	11,713
1981	401	677	845	510	280	1,370	1,100	370	105	1,640	160	355	1,830	115	11,105
1982[1]	330	581	750	480	240	1,130	1,110	350	90	1,640	125	335	1,660	112	10,099
1983															

[1] Preliminary. [2] Cattle & calves being fattened for slaughter market on grain or other concentrates & are expected to produce a carcass that will grade good or better. *Source: Crop Reporting Board, U.S.D.A.*

CATTLE AND CALVES



Farm Value, Income & Wholesale Prices of Cattle & Calves

	United States			At Omaha									Beef, Dressed[4]		
	Farm Value of All Cattle—Jan. 1		Gross Income From C. & C.[2]	Steers[3]			Heifers		Choice Feeder Steers at K.C.	Cows, Utility Omaha	Vealers, Choice-So. St. Paul	Cows, Commercial Omaha			
Year	Per Head $	Total Million $	$	Prime	Choice	Good	Good	Choice					Steer, Choice	Heifer, Choice	Cow[5] Canners[6]
				Dollars Per 100 Pounds											
1969	158	17,390	12,781	30.62	29.45	27.14	26.13	28.53		20.29	38.90	19.99	47.75	46.62	41.58
1970	179	20,160	13,935	30.22	29.36	27.04	26.42	28.51		21.32	44.82	20.94	46.82	46.26	44.72
1971	184	21,113	15,247	33.38	32.39	29.38	28.52	31.46		21.62	46.30	21.21	52.39	51.72	45.63
1972	208	24,520	18,579	36.67	35.78	33.43	32.24	34.72		25.21	55.09	24.86	55.34	54.56	51.41
1973	252	30,584	22,814	45.61	44.54	42.01	40.43	43.11	53.17	32.82	64.08	32.90	67.41	66.44	65.78
1974	293	37,477	18,350	43.13	41.89	38.71	38.00	40.97	37.88	25.56	49.63	25.45	67.09	66.51	53.48
1975	159	21,000	17,978	41.39	44.61	39.45	37.60	43.12	33.91	21.09	40.44	21.63	73.64	71.62	43.09
1976	190	24,335	19,795		39.11	35.87	34.10	37.98	39.40	25.31	45.18	26.08	60.96	59.75	52.00
1977	206	25,249	20,708		40.38	36.70	35.20	38.96	40.18	25.32	48.19	26.11	62.66	60.94	51.55
1978	232	27,030	28,813		52.34	47.98	46.11	50.30	58.78	36.78	69.24	37.80	80.80	78.58	74.61
1979	403	44,698	35,128		67.67	63.05	61.47	65.91	83.08	50.10	91.41	50.06	101.72	100.00	100.48
1980[1]	502	55,831	31,870		67.05	62.16	61.22	64.90	75.23	45.72	75.53	44.90	104.39	101.86	92.45
1981[1]	475	54,292			63.84	54.85	58.94	61.95	66.24	41.93	77.16	42.42			
1982[1]	415	47,979													

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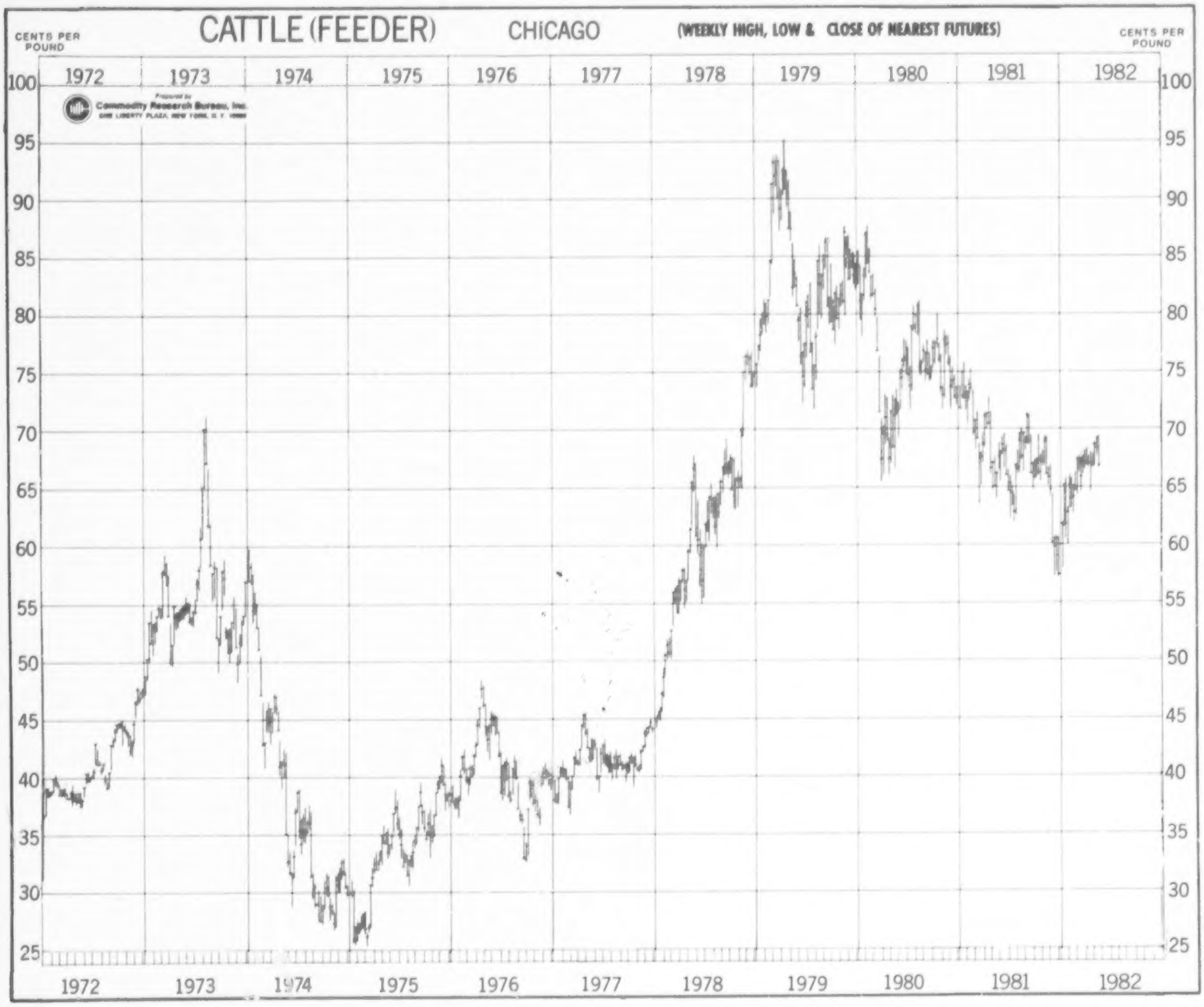
[1] Preliminary. [2] Excludes interfarm sales & Gov't. payments. Cash receipts from farm marketings plus value of farm home consumption. [3] Weighted average prices of beef steers, sold out of first hands for slaughter. [4] Carlots. [5] All weights. [6] And cutter. *Source: Statistical Reporting Service, U.S.D.A.*



Average Prices of Steers (Stocker & Feeder) Kansas City In Dollars Per 100 Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1973	44.24	48.06	50.90	50.67	50.79	49.38	53.23	56.40	49.73	49.84	47.63	44.42	49.13
1974	48.70	45.30	43.65	42.49	37.24	33.16	34.44	33.26	29.80	29.80	27.97	28.05	36.49
1975	26.79	26.80	27.86	30.73	34.87	35.30	32.53	32.93	35.98	36.74	36.77	36.87	33.42
1976	36.66	36.95	38.82	43.49	42.38	40.24	37.58	37.55	34.03	36.07	35.07	35.19	37.65
1977	34.87	36.54	38.29	41.33	39.88	38.22	38.90	39.61	39.04	40.18	38.79	39.71	38.74
1978	42.85	46.89	51.39	53.81	59.85	57.42	58.67	58.22	60.23	62.06	60.75	64.19	56.16
1979	69.95	75.61	82.55	86.83	82.20	75.00	72.07	72.37	77.81	76.34	78.92	77.55	77.60
1980	76.52	78.35	72.67	66.89	65.52	68.83	69.48	71.92	71.53	71.64	70.23	70.04	75.13
1981	68.56	68.41	65.47	66.28	63.10	63.51	61.51	64.15	64.58	62.52	61.77	58.96	64.26
1982	59.22	62.37											

Source: Economic Research Service, U.S.D.A.

CATTLE AND CALVES

High, Low & Closing Prices of June Live Beef Cattle Futures at Chicago In Cents per Pound

Year of Delivery		Year Prior to Delivery									Delivery Year						Life of Delivery
		Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Range
1978	High	47.20	46.40	44.55	42.60	40.35	39.65	40.20	41.85	43.30	45.17	47.62	53.10	53.75	62.35	60.95	62.35
	Low	45.85	43.65	41.40	40.20	37.40	38.55	38.82	39.40	41.10	42.20	44.65	46.25	49.10	53.45	54.15	37.40
	Close	46.12	44.35	42.55	40.40	38.80	39.55	39.60	41.35	43.02	45.17	46.32	50.47	53.27	60.97	56.15	—
1979	High	53.65	60.27	58.75	59.57	57.85	60.60	61.90	62.25	64.50	67.90	70.50	74.22	79.75	79.12	72.97	79.75
	Low	49.90	53.65	51.10	54.40	53.45	57.05	57.25	58.25	61.20	63.00	64.65	69.52	70.75	70.10	68.05	48.60
	Close	53.60	58.35	55.70	57.60	57.07	59.62	60.25	61.30	63.55	67.67	70.20	71.35	78.35	71.97	68.15	—
1980	High	75.00	74.50	73.60	74.40	72.85	74.30	76.10	76.95	75.80	76.00	75.10	73.77	67.20	67.50	69.50	76.95
	Low	69.20	70.55	68.10	65.45	64.05	70.40	69.12	72.05	72.02	67.70	71.35	63.22	60.25	62.80	63.35	60.25
	Close	73.75	70.90	71.40	66.30	72.62	73.75	72.57	74.92	75.05	71.80	71.95	63.60	64.82	65.30	69.02	—
1981	High	—	—	—	75.25	74.92	76.00	76.60	76.50	76.35	72.65	71.42	68.55	72.40	70.72	70.97	76.60
	Low	—	—	—	70.80	71.80	72.85	72.90	73.67	69.40	68.05	66.65	63.17	70.10	66.22	67.62	63.17
	Close	—	—	—	73.95	74.87	73.55	74.37	76.07	71.32	68.72	67.77	68.55	70.17	68.17	69.35	—
1982	High	72.30	71.90	70.40	67.95	66.97	67.35	66.72	66.05	63.55	61.60	64.75	66.87	70.10			
	Low	70.40	68.05	66.85	64.82	64.02	64.42	64.60	61.80	54.75	56.00	60.65	62.72	66.20			
	Close	70.40	69.80	67.00	67.02	65.37	65.27	65.20	63.30	55.77	61.40	62.92	66.42	69.57			
1983	High	—															
	Low	—															
	Close	—															

Source: Chicago Mercantile Exchange

Volume of Trading of Live Beef Cattle Futures at Chicago In Thousands of Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	23.80	314.4	468.6	458.6	580.4	597.4	459.2	498.6	500.3	602.3	433.9	440.6	5,040.0
1979	534.2	526.1	660.3	697.4	720.1	586.5	554.2	683.4	553.5	674.3	554.4	470.5	7,214.8
1980	646.0	545.5	562.0	568.6	499.5	460.7	604.3	443.8	461.1	461.0	348.3	395.2	5,997.0
1981	354.8	347.8	430.7	416.4	350.0	361.0	320.8	329.3	348.9	327.7	335.3	359.7	4,282.4
1982	387.2	332.5	434.3	355.8									
1983													

Source: Chicago Mercantile Exchange

Month End Open Interest of Live Beef Cattle Futures at Chicago In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	59,234	72,397	84,902	84,016	95,783	74,827	79,734	86,634	91,351	91,719	91,163	88,797
1979	97,005	96,410	84,814	75,913	65,881	60,296	57,506	59,621	75,371	55,978	64,729	62,872
1980	57,192	60,701	50,406	55,582	53,319	59,162	67,059	57,314	58,815	58,009	64,570	45,864
1981	45,325	45,425	48,336	54,045	48,667	50,162	44,597	53,142	51,267	54,025	61,763	51,226
1982	51,036	51,082	61,160	58,383								

Source: Chicago Mercantile Exchange

Average Wholesale Prices of Beef Steers at Omaha, Choice (900–1100 Lbs.) In Dollars Per 100 Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1973	40.65	43.54	45.65	45.03	45.74	46.76	47.66	52.94	45.12	41.92	40.14	39.36	44.54
1974	47.14	46.38	42.85	41.53	40.52	37.98	43.72	46.62	41.38	39.64	37.72	37.20	41.89
1975	36.34	34.74	36.08	42.80	49.48	51.82	50.21	46.80	48.91	47.90	45.23	45.01	44.61
1976	41.18	38.80	36.14	43.12	40.62	40.52	37.92	37.02	36.97	37.88	39.15	39.96	39.11
1977	38.38	37.98	37.28	40.08	41.98	40.24	40.94	40.11	40.35	42.29	41.83	43.13	40.38
1978	43.62	45.02	48.66	52.52	57.28	55.38	54.59	52.40	54.26	54.93	53.82	55.54	52.34
1979	60.35	64.88	71.04	75.00	73.99	68.53	67.06	62.74	67.84	65.81	67.00	67.78	67.75
1980	66.32	67.44	66.88	63.07	64.58	66.29	70.47	72.31	69.68	67.18	65.05	64.29	66.96
1981	63.08	61.50	61.40	64.92	66.86	68.26		66.37	65.37	61.45	59.84	59.24	63.84
1982	60.75	63.54											

Source: Economic Research Service, U.S.D.A.

Federally Inspected Slaughter of Cattle in the United States In Thousands of Head

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1972	2,556	2,457	2,707	2,471	2,807	2,833	2,494	2,926	2,789	2,909	2,705	2,615	32,267
1973	2,810	2,424	2,620	2,169	2,694	2,563	2,441	2,366	2,362	2,866	2,687	2,519	30,521
1974	2,794	2,303	2,621	2,643	2,793	2,621	2,821	2,876	2,787	3,230	2,929	2,902	33,319
1975	3,152	2,778	2,826	2,889	2,851	2,898	3,085	3,141	3,319	3,584	3,116	3,267	36,904
1976	3,403	3,032	3,492	3,053	2,980	3,294	3,220	3,388	3,435	3,336	3,154	3,205	38,992
1977	3,272	3,041	3,331	3,025	3,054	3,374	3,085	3,489	3,320	3,282	3,244	3,200	38,717
1978	3,238	3,047	3,243	2,969	3,215	3,052	2,869	3,247	3,027	3,180	3,029	2,834	36,948
1979[1]	3,090	2,559	2,670	2,366	2,622	2,554	2,492	2,860	2,390	2,837	2,593	2,470	31,844
1980[1]	2,739	2,486	2,403	2,539	2,616	2,533	2,667	2,684	2,739	3,003	2,507	2,725	31,642
1981[1]	2,803	2,483	2,726	2,625	2,593	2,769	2,760	2,768	2,840	2,935	2,668	2,829	32,798
1982[2]	2,771	2,591	2,819										

Source: Crop Reporting Board, U.S.D.A.

Federally Inspected Slaughter of Calves & Vealers in the U.S. In Thousands of Head

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1972	226	217	255	185	179	166	164	208	197	211	209	202	2,421
1973	209	169	188	139	131	117	118	115	128	168	170	156	1,808
1974	181	154	180	172	167	137	164	202	212	279	251	254	2,355
1975	284	250	276	284	270	276	344	345	385	443	357	381	3,894
1976	369	327	415	353	304	339	346	373	409	394	388	420	4,438
1977	408	380	457	389	353	368	352	411	403	392	398	387	4,696
1978	368	336	386	304	288	271	261	304	275	287	274	267	3,620
1979	265	212	245	200	188	162	190	216	193	225	210	192	2,498
1980	212	187	201	185	161	154	186	182	198	229	185	214	2,294
1981	215	192	213	190	158	175	203	197	227	236	217	254	2,475
1982	229	210	263										

Source: Crop Reporting Board, U.S.D.A.

Average Price Received by Farmers for Beef Cattle In Dollars Per 100 Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.	Average[1]
1972	31.80	32.90	32.50	32.20	33.30	34.50	34.60	33.60	34.00	34.40	33.00	34.80	33.50
1973	37.90	40.70	43.80	42.80	43.60	43.90	44.60	51.70	46.70	42.70	39.60	37.70	43.00
1974	44.20	43.60	40.70	39.20	37.30	32.60	35.30	37.00	32.60	30.60	28.20	27.70	35.80
1975	27.40	26.80	27.80	31.60	35.30	36.80	35.20	32.30	34.00	33.40	32.30	33.50	32.20
1976	32.80	33.90	33.40	38.00	37.10	36.40	33.60	33.00	32.30	32.20	31.20	32.40	33.90
1977	32.20	33.20	33.80	35.30	36.30	34.00	34.90	34.50	34.70	35.10	34.30	35.50	34.50
1978	37.70	40.50	44.00	47.20	50.50	51.10	50.10	49.30	52.20	53.20	51.90	54.60	48.50
1979	60.20	64.70	70.60	73.40	71.90	66.80	65.50	62.20	66.80	64.60	63.90	64.40	66.30
1980	63.80	67.00	64.40	60.60	60.70	61.10	63.20	64.40	63.00	62.10	60.00	59.40	62.50
1981[2]	60.40	59.40	58.20	61.00	60.50	61.40	60.50	59.70	58.80	55.70	54.50	52.00	58.00
1982[2]	53.60	56.10	58.60	60.60									

[1] Weighted average by quantities sold. [2] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

Average Price Received by Farmers for Calves In Dollars Per 100 Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average[1]
1973	49.40	53.00	58.50	56.60	58.90	58.50	59.20	68.20	61.20	57.70	52.80	50.10	57.00
1974	54.10	53.30	49.60	47.40	42.70	37.40	36.00	34.30	30.10	27.70	25.70	25.00	38.60
1975	23.90	24.50	24.80	26.90	29.10	29.10	27.70	25.40	26.90	26.60	28.30	30.00	26.90
1976	30.80	33.80	34.80	38.20	38.80	37.70	34.90	34.20	32.90	33.00	32.10	32.80	34.50
1977	33.40	35.70	36.60	38.20	38.40	35.80	36.40	37.10	38.00	37.20	36.80	37.50	36.80
1978	41.00	44.90	50.00	53.70	59.50	58.70	60.10	61.90	65.70	66.40	67.20	72.10	58.40
1979	79.10	87.00	94.80	98.20	99.50	92.30	91.20	87.20	90.00	86.90	86.30	84.30	89.70
1980	86.90	90.90	82.60	75.50	75.40	76.90	75.40	75.60	74.30	73.90	72.10	70.30	77.50
1981[2]	70.40	70.60	68.80	69.60	66.00	66.30	62.00	62.30	61.40	59.00	59.40	57.70	64.90
1982[2]	57.10	58.90	61.90	62.60									

[1] Weighted average by quantities sold. [2] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

Cement

U.S. production of cement (portland, masonry, and other) in 1981 was about 3 percent smaller than in 1980, according to preliminary U.S. Bureau of Mines data. Total 1981 shipments of finished portland cement (including Puerto Rico) were 5% less than in the preceding year and 19 percent below the 1973 record. Masonry cement shipments were 10% less than the 1980 total and 34% below the 1973 record.

Hydraulic cement and clinker imports, mostly from Canada, Spain, and Denmark, were 24 percent below 1980 imports.

According to preliminary U.S. Bureau of Mines data, total U.S. demand for cement in 1981 was about 3 percent below that of 1980, mainly because of reduced industrial/commercial construction resulting from high interest rates. Nevertheless, a notable increase in consumption occurred in most of the western and mountain states. As a chief binding agent in concrete and mortars, 68 percent was used for ready-mixed concrete; 13 percent for concrete products such as block, pipe, and prestressed precast concrete; 7 percent by building materials dealers; 4 percent by highway contractors; and 8 percent by other contractors, government agencies, and for miscellaneous uses.

The trend continued towards consolidation of the industry through acquisition of companies and plants by large firms—some of which are foreign-owned. Older plants with high production costs were either closed or modernized to achieve economies of scale and fuel consumption savings.

Environmental concerns have prompted the use of dust collectors or electrostatic precipitators to control atmospheric emissions of possible contaminants.

Concrete is expected to continue as a mainstay of construction. But competitive construction materials include aluminum, steel, fiberglass, wood, stone, and clay products.

World Production of Hydraulic Cement by Selected Countries In Millions of Short Tons

Year	Belgium	Brazil	Canada	China	France	W. Germany	India	Italy	Japan	Poland	Spain	Rep. of So. Afr.	Un. Kingdom	United States	U.S.S.R.	World Total
1970	7.4	9.9	7.9	11.0	32.0	42.2	14.9	36.5	63.0	13.4	18.4	6.3	18.8	74.6	105.0	629.6
1971	7.6	10.8	9.1	25.3	31.9	45.2	16.4	35.1	65.5	14.4	18.9	6.5	19.5	80.3	110.6	679.9
1972	7.8	12.5	10.0	25.4	33.0	47.6	17.4	36.9	73.1	15.4	21.6	6.7	19.9	84.6	115.0	723.8
1973	7.8	14.8	11.1	27.6	33.9	45.2	16.5	40.0	86.1	17.1	24.7	7.6	22.0	87.6	120.7	773.8
1974	8.4	16.4	11.4	27.6	35.6	39.7	15.7	40.0	80.6	18.5	24.5	8.0	19.6	82.9	126.9	775.2
1975	7.6	19.2	11.0	33.1	32.6	36.9	17.9	37.7	72.2	20.4	26.6	7.9	18.6	69.7	134.5	774.0
1976	8.3	21.1	10.6	54.3	32.4	39.0	20.6	40.0	75.7	21.8	27.8	7.8	17.4	74.5	137.0	834.3
1977	8.6	21.1	10.6	61.3	31.8	36.8	21.1	41.6	80.6	23.5	30.9	7.2	17.0	80.1	140.0	876.5
1978	8.4	24.4	11.6	71.9	30.9	39.0	21.6	41.6	93.6	23.9	33.3	7.5	17.5	85.5	139.9	939.8
1979	8.5	27.4	13.0	81.5	31.8	40.8	20.1	44.2	96.8	21.1	30.8	7.6	17.8	85.9	135.6	963.2
1980[1]	8.5	29.2	11.6	90.0	32.0	39.0	19.3	47.0	97.0	20.3	31.0	7.7	16.0	77.0	138.0	978.0
1981[2]				90.0	30.0	36.0		45.0	100.0		30.0		15.0	74.0	140.0	970.0

[1] Preliminary. [2] Estimate. *Source: Bureau of Mines*

Salient Statistics of Cement in the United States

Year	Net Import Reliance as a % of Apparent Consumption	Production — Million Tons			Capacity Used[3] %	Shipments From Mills		Average Value (F.O.B. Mill) $ per Ton	Million Tons				Raw Materials Used in Producing Portland Cement — Mil. Short Tons			
		Portland	Others [2]	Total		Total Mil. Tons	Value[4] $ Mil.		Stocks at Mills Dec. 31	Imports[5]	Exports[5]	Apparent Consumption	Cement Rock	Limestone[6]	Clay & Shale	Total (All)
1969				76.7	78.7	78.6	1,354	17.22	7.1	1.7	.1	80.3	23.3	84.2	12.2	128.1
1970		73.2	2.9	74.3	88.4	74.6	1,336	17.91	7.6	2.5	.1	75.9	22.8	83.2	11.8	127.2
1971		77.0	3.3	78.3	87.7	80.4	1,528	19.01	6.4	3.1	.1	81.5	23.1	85.9	11.8	130.3
1972		80.7	3.8	82.6	90.6	83.3	1,724	20.69	7.0	4.9	.1	85.0	25.9	84.9	12.2	136.9
1973		83.6	1.9	85.5	83.2	88.7	1,975	22.28	5.5	6.6	.3	90.7	26.1	85.7	12.0	138.2
1974		79.5	1.4	80.9	74.8	81.0	2,151	26.54	7.5	5.7	.2	82.9	23.4	87.7	11.8	137.2
1975	4	66.8	1.3	68.1	62.9	69.1	2,159	31.25	6.9	3.6	.4	70.1	17.9	76.4	10.1	114.9
1976	5	71.2	1.8	73.0	68.4	73.7	2,510	34.07	7.2	3.1	.3	74.1	20.2	81.3	10.7	122.6
1977	6	76.3	2.3	78.6	81.6	80.2	2,932	36.54	6.0	4.0	.2	81.5	25.1	81.5	10.8	128.0
1978	7	81.4	2.6	84.0	77.5	86.6	3,544	40.94	5.3	6.6	.1	87.6	34.4	78.5	11.2	135.6
1979	11	82.1	2.4	84.5	77.1	85.7	3,992	46.55	6.6	9.4	.1	87.8	31.0	83.2	11.3	136.5
1980[1]	6	73.7	1.5	75.2	68.9	76.2	3,886	50.98	6.8	5.2	.2	77.6	25.0	80.6	10.4	126.0
1981[7]	5			73.0		75.0	4,050	54.00	7.0	4.0	.3	75.0				
1982																

[1] Preliminary. [2] Masonry, natural & pozzolan (slag-line). [3] At Portland-cement mills. [4] Value received f.o.b. mill, excluding cost of containers. [5] Hydraulic cement. [6] Including oyster shells. [7] Estimate. *Source: Bureau of Mines*

U.S. Portland Cement Output Index (Unadjusted) (1947–49=100)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1969	114.2	120.2	156.2	207.3	236.0	245.4	253.4	257.2	259.9	260.7	184.2	155.4	204.2
1970	101.7	120.8	153.9	196.9	217.6	239.0	253.4	249.1	228.2	234.1	178.6	158.2	194.3
1971	104.1	116.9	170.3	217.5	227.0	265.2	253.7	270.0	255.3	255.7	215.1	156.8	209.0
1972	134.0	138.2	192.8	205.1	252.6	269.6	253.0	304.5	264.2	275.4	198.6	144.2	219.4
1973	143.3	148.5	201.0	217.1	277.9	282.7	285.0	319.3	259.4	301.0	230.6	158.5	235.4
1974	132.6	147.3	189.4	229.7	257.4	258.4	256.0	270.5	248.3	271.9	183.8	138.7	215.3
1975	114.8	105.0	131.4	172.1	204.0	213.8	232.3	234.3	232.7	248.8	169.5	136.3	182.9
1976	106.2	122.7	168.0	198.2	205.5	238.7	230.9	251.1	233.6	223.7	190.4	138.6	192.3
1977	83.5	125.0	187.5	213.6	238.3	269.5	243.9	272.3	250.9	258.5	205.1	156.3	208.7
1978	91.7	110.8	188.1	226.5	268.6	297.8	261.6	301.2	266.4	289.9	226.4	173.2	225.2
1979	99.5	111.5	193.9	214.4	267.0	287.9	270.9	301.4	257.8	296.4	227.1	174.7	225.2
1980							No Longer Available						

Source: Portland Cement Association

Shipments of Finished Portland Cement from Mills in the United States In Millions of Barrels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total[1]
1969	19.1	20.1	26.1	34.6	39.3	41.0	42.4	43.0	43.1	43.6	31.2	26.0	409.8
1970	17.1	20.2	25.7	32.9	36.4	39.7	42.3	41.6	38.2	39.1	29.9	26.4	390.5
1971	17.3	19.4	28.3	36.2	37.8	44.1	42.2	45.1	42.6	43.1	36.0	26.2	420.2
1972	22.4	23.9	32.2	34.6	42.2	45.0	42.3	50.4	44.4	46.0	33.2	24.1	440.5
1973	23.9	24.8	33.6	36.1	46.5	47.2	47.6	53.1	43.4	50.2	38.6	26.5	472.0
1974	22.2	24.6	31.8	38.6	43.1	43.4	42.7	45.2	41.6	45.5	30.7	23.2	431.9
1975	19.2	17.6	21.8	28.8	34.1	36.3	38.9	39.2	38.9	41.7	28.3	22.8	367.1
1976	17.7	20.5	28.1	33.1	34.5	39.9	38.6	41.8	38.9	37.4	31.7	23.2	385.7
1977	14.0	20.9	31.3	35.7	40.2	45.1	40.5	45.5	42.0*	43.2	34.5	26.1	418.8
1978	15.3	18.5	31.5	37.2	44.9	49.8	43.8	50.3	44.6	48.5	37.9	29.0	451.3
1979	16.6	18.7	32.4	35.8	44.6	48.2	45.3	50.3	43.1	49.6	38.1	29.2	451.4
1980	22.0	22.1	26.0	33.0	36.3	39.3	39.8	39.6	40.5	43.3	31.8	28.2	404.6
1981	20.7	20.8	30.2	35.2	34.2	38.1	38.9	37.5	37.3	36.3	29.6	23.5	382.7
1982	15.1												

[1] Does not necessarily agree with monthly figures. These are compiled from producers' annual reports and are final.
Source: Bureau of Mines

Index of Wholesale Price of Portland Cement[1] Base Per Ton 1967 = 100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1969	3.557	3.564	3.580	3.565	3.565	3.565	3.565	3.565	3.566	3.566	3.566	3.566	3.566
1970	3.737	3.735	3.734	3.734	3.741	3.741	3.741	3.741	3.741	3.741	3.741	3.733	3.738
1971	3.983	3.963	3.957	3.958	3.958	3.958	4.059	4.088	4.092	4.092	4.094	4.094[2]	4.025
1972[1]	127.8	128.1	128.1	131.5	131.8	131.9	132.1	134.0	134.2	134.2	134.3	134.3	131.9
1973	134.4	134.4	135.3	138.4	137.6	137.6	137.9	137.9	137.9	138.2	138.3	138.3	137.2
1974	149.5	151.2	151.7	155.5	155.8	156.2	169.8	169.9	170.3	171.1	171.1	171.1	161.9
1975	187.0	189.3	189.4	191.9	193.1	193.1	195.2	195.0	196.5	196.3	196.1	196.1	193.3
1976	203.4	204.0	204.0	212.0	212.0	212.1	214.7	214.7	214.7	214.5	214.5	214.6	211.3
1977	221.1	221.4	221.4	225.4	227.8	227.8	228.8	229.0	229.0	228.9	228.7	228.7	226.5
1978	240.6	240.9	241.1	248.6	248.6	248.6	251.7	254.8	255.7	256.2	253.7	253.7	249.5
1979	275.5	278.9	280.5	283.3	283.3	283.8	285.5	285.5	285.5	285.5	285.5	286.3	283.3
1980	305.8	305.9	306.3	312.6	313.9	313.9	313.3	313.1	312.2	311.7	310.4	310.4	310.8
1981	319.1	319.0	321.2	328.9	332.3	330.9	331.5	331.5	331.9	330.2	327.0	327.0	327.5
1982	336.3	338.2											

[1] Prior to 1972 prices are $ per 376 pound barrel. [2] Price index for Dec. 1971 is 127.8
Source: Bureau of Labor Statistics (1322-0131.19)

Cheese

Cheese production in the U.S. continued to expand in 1981. According to preliminary USDA estimates, production of American cheese increased 8.9 percent in 1981 to 2,585 million pounds and utilized 2.1 billion pounds more milk than in 1980. Production of other cheeses (excluding cottage cheese) increased to 1,620 million pounds, up 0.7 percent from 1980.

Commercial disappearance of American cheese during 1981 increased 3.3 percent from 1980, totaling 2,091 million pounds. Commercial disappearance of non-American type cheeses in 1981 increased almost 2 percent from 1980 to 1,860 million pounds. Stocks of American cheese at the end of 1981 totaled 889 million pounds vs. 592 million in 1979. Stocks of other cheese declined to 87 million pounds at the end of 1981 vs. 99 million in 1980.

There was little change in prices of products that the CCC buys during 1981 and early 1982. In early March 1982, the price of cheddar cheese (Wisconsin assembly points) was below a year earlier—500-pound barrels were quoted at $1.31 a pound, 2.5 cents lower than a year earlier, while 40-pound blocks, at $1.37 per pound, were down 1.5 cents. Wholesale dairy prices in 1982 were expected to remain near present levels until late summer and then move somewhat higher because of an improving economy, a small increase in CCC purchase prices, and a better supply-demand balance near yearend.

The CCC purchase prices (per pound) for 40-pound blocks of U.S. Grade A and 500-pound barrels of U.S. export grade cheddar remained at $1.39½ and $1.36½, respectively, throughout 1981 and early 1982.

USDA net removals of cheese increased 61 percent during 1981 to 563 million pounds from 350 million pounds in 1980. Uncommitted CCC stocks of American cheese stood at 585 million pounds in early March 1982 vs. 267 million a year earlier.

Over 247 million pounds of cheese were imported into the U.S. during 1981, an increase of 7 percent from 1980. Because of the U.S. dairy price support program, the government regulates imports of many cheeses (basically those also produced in the U.S.) with quotas. Quota cheese imports increased 9 percent in 1981 from 1980 to 212.5 million pounds.

World Cheese (Total[1]) Production In Millions of Metric Tons[3]

Year	Argentina	Australia	Canada	China	Czechoslovakia	Denmark	France	W. Germany	Italy	Netherlands	New Zealand	U.S.S.R.	Sweden	Switzerland	United Kingdom	United States
1971	188	78	112		77	120	821	517	401	306	108	463	66	90	162	1,077
1972	205	81	163		80	131	871	545	424	322	104	483	66	96	184	1,181
1973	206	93	165		85	124	885	558	435	333	101	536	68	97	182	1,218
1974	211	96	130		86	145	917	595	543	376	89	565	70	100	215	1,333
1975	226	99	121		90	147	943	618	529	375	89	559	81	104	239	1,275
1976	240	113	125	203	96	152	978	650	537	382	105	655	84	111	204	1,506
1977	236	104	133	208	99	172	1,023	691	553	412	81	655	87	115	207	1,523
1978	239	112	140	210	98	177	1,063	713	583	420	81	691	94	121	216	1,597
1979	239	132	167	215	99	189	1,117	732	601	432	90	701	96	125	234	1,686
1980[2]	245	142	177	270	109	221	1,145	775	612	443	106	678	100	125	237	1,807
1981[3]	240	124	181		110	249	1,170	813	600	460	84	685	106	125	245	1,934

[1] Farm & factory production. [2] Preliminary. [3] Estimate. *Source: Foreign Agricultural Service, U.S.D.A.*

Supply and Distribution of All Cheese in the United States In Millions of Pounds

	Supply					Distribution								Am. Cheese
	Production						Dept. of Agriculture				Domestic Disapp.			
Year	Whole Milk[2]	All Cheese[3]	Jan. 1 Commercial Stocks	Imports[4]	Total Supply	Exports & Shipments[5]	Jan. 1 Stocks	Dec. 31 Stocks	Deliveries	Total Disap.	Military	Civilian	Civilian Per Capita	Removed by U.S.D.A. Programs
1969	1,266	1,990	353	144	2,487	23	52	1		2,222	17	2,182	10.9	28
1970	1,428	2,201	317	161	2,679	24	1	1		2,345	14	2,317	11.5	49
1971	1,512	2,374	323	136	2,833	29	1	6		2,527	12	2,486	12.2	91
1972	1,644	2,604	301	179	3,085	30	6	—		2,759	10	2,719	13.2	30
1973	1,673	2,685	331	230	3,246	30	—	—		2,888	9	2,849	13.7	3
1974	1,859	2,937	358	316	3,611	36	—	1		3,117	10	3,044	14.4	60
1975	1,655	2,811	494	179	3,484	33	1	2		3,115	10	3,009	14.2	68
1976	2,049	3,321	369	207	3,897	35	2	2		3,366	7	3,418	15.4	38
1977	2,043	3,358	479	210	4,047	38	2	61		3,513	9	3,560	15.5	148
1978	2,074	3,519	487	242	4,248	44	61	30		3,736	11	3,791	16.5	40
1979	2,190	3,717	457	248	4,422	47	30	3		3,838	24	3,909	17.2	40
1980[1]	2,375	3,984	513	231	4,728	46	3	190		3,975	16	4,037	17.6	350
1981[1]	2,585	4,205	691	248	5,144	45	190	249		4,111	12	4,168	18.0	563
1982[1]			976				249							

[1] Preliminary. [2] Whole milk American cheddar. [3] All types of cheese except cottage, pot and baker's cheese. [4] Imports for consumption. [5] Commercial. *Source: Department of Agriculture*

Cheese Production in the United States In Millions of Pounds

Year	American			Swiss, Including Block	Brick & Munster	Limburger	Neufchatel	Cream Cheese	Italian Varieties	Blue mold	All Other Varieties	Total of All Cheese[2]	Cottage Cheese		
	Whole Milk	Part Skim	Total										Low-Fat	Curd[4]	Creamed[5]
1972	1,644	8.1	1,652	177.8	67.5	2.5	5.0	128.3	512.1	28.5	30.5	2,605	102.4	784.2	1,013
1973	1,673	5.1	1,678	164.2	68.8	2.6	4.2	135.5	565.3	29.8	37.4	2,685	128.0	763.0	958
1974	1,859	3.7	1,862	175.3	72.2	2.4	3.6	146.7	606.1	28.3	40.5	2,937	121.9	689.7	856
1975	1,655	5.4	1,660	173.8	71.7	1.9	5.0	155.3	671.9	28.5	43.5	2,811	129.3	701.0	862
1976	2,049	5.0	2,054	196.3	74.5	1.9	3.6	164.4	747.4	33.9	44.4	3,320	135.4	711.1	875
1977	2,043	4.1	2,046	189.3	71.3	1.7	3.3	173.1	793.5	34.8	44.4	3,358	139.0	684.5	878
1978	2,069	4.9	2,074	209.4	76.2	1.6	3.9	194.3	875.7	35.3	44.2	3,520	153.1	688.4	871
1979	2,190	4.4	2,194	213.3	78.0	1.6	5.2	207.1	929.1	34.6	54.1	3,717	158.4	668.5	840
1980[1]	2,375	5.5	2,381	218.9	85.4	1.6	4.3	224.3	982.7	33.0	52.9	3,983	178.3	665.3	823
1981[3]	2,585								1,001			4,205	193.9		772

[1] Preliminary. [2] Excludes full-skim cheddar and cottage cheese. [3] Estimated. [4] Includes cottage, pot, and baker's cheese with a butterfat content of less than 4%. [5] Includes cheese with a butterfat content of 4 to 19%.
Source: Agricultural Marketing Service, U.S.D.A.

United States Total Cheese Production[1] In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1972	197.0	194.2	227.9	228.1	251.0	258.5	234.9	219.8	199.8	200.0	186.7	206.8	2,605
1973	204.5	194.3	230.4	241.1	266.3	266.7	236.7	216.2	187.4	202.7	205.4	233.7	2,685
1974	240.7	236.6	277.2	277.8	282.7	278.4	252.4	232.9	214.5	219.2	206.4	218.4	2,937
1975	214.3	204.2	240.7	244.4	271.0	275.0	249.2	226.9	214.8	220.2	208.7	242.0	2,811
1976	245.6	236.7	278.0	293.5	314.3	322.3	294.9	283.5	261.2	254.5	255.3	280.4	3,320
1977	265.6	252.5	299.7	304.7	326.1	316.0	280.2	275.7	251.7	256.9	247.8	281.6	3,359
1978	271.1	259.9	314.4	303.7	332.9	331.9	293.6	286.5	265.0	279.3	279.7	301.4	3,519
1979	292.5	272.2	323.0	318.8	340.4	343.8	318.8	309.0	290.7	308.0	289.4	308.7	3,715
1980	312.3	303.1	339.7	336.6	360.5	359.9	332.7	317.6	317.0	332.1	317.2	354.4	3,983
1981[2]	342.8	316.5	365.4	371.2	386.9	385.9	347.1	333.7	324.5	338.8	326.3	365.4	4,205
1982[2]	347.0	672.8											

[1] Excludes cottage and full skim American. [2] Preliminary. *Source: Statistical Reporting Service, U.S.D.A.*

Wholesale Price of American Cheese, Fresh Single Daisies at Chicago In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1972	68.4	70.7	72.7	71.9	70.2	70.2	70.7	70.9	70.9	71.8	73.6	74.4	71.4
1973	74.5	74.6	76.5	78.3	79.2	80.2	80.1	84.7	89.8	94.4	97.1	102.0	84.3
1974	104.8	103.9	105.9	104.8	97.9	89.2	88.8	89.8	94.5	96.5	96.2	94.6	97.3
1975	93.6	94.6	95.2	96.8	98.7	100.6	103.0	106.4	111.9	116.4	116.9	119.2	104.4
1976	118.2	108.2	113.8	116.6	114.6	115.3	120.0	125.8	118.3	114.2	114.0	114.0	116.1
1977	114.0	114.0	115.2	119.3	119.3	119.4	119.4	119.4	120.5	120.6	121.1	122.4	118.7
1978	122.9	124.1	124.6	125.9	125.9	125.9	126.0	132.1	134.0	139.4	140.0	141.0	130.1
1979	141.0	135.0	135.6	137.4	137.6	138.9	140.9	145.8	148.8	146.6	144.7	144.4	141.4
1980	146.7	147.2	150.8	153.5	154.2	154.8	155.5	157.0	161.5	165.3	164.1	164.1	156.2
1981	164.0	164.0	166.9	167.0	167.8	167.9	167.8	167.8	167.8	168.5	169.2	168.4	167.3
1982	168.4	168.4											

Source: Statistical Reporting Service, U.S.D.A.

Cold Storage Holdings of All Varieties of Cheese in the U.S., on First of Month In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1973	331.4	324.6	321.0	302.4	303.4	330.6	374.2	392.9	395.5	382.3	371.0	356.0
1974	357.8	366.8	395.5	438.9	489.5	533.4	570.7	566.0	552.4	539.1	512.1	502.2
1975	494.0	485.9	458.5	447.5	441.0	454.8	475.1	477.6	449.7	422.2	388.3	378.5
1976	367.8	362.3	362.3	367.9	393.7	436.1	483.7	509.0	518.0	522.6	501.4	482.0
1977	478.4	485.7	471.2	485.8	510.3	557.2	583.7	592.9	592.9	553.9	502.8	479.8
1978	468.6	459.6	442.0	430.0	447.1	462.5	500.2	498.5	489.7	476.6	455.2	431.0
1979	436.4	436.6	446.2	448.6	462.2	495.3	519.9	555.3	548.5	540.6	526.9	528.2
1980	512.1	515.8	508.9	495.1	510.5	544.4	[illegible]	620.0	613.8	610.6	590.9	565.4
1981[1]	578.8	601.7	596.3	593.6	631.9	649.8	685.7	714.2	720.9	694.3	682.4	677.5
1982[1]	709.6	711.7	696.4	723.4								

Quantities are given in "net weight." [1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

Chromite

Chromite is the only source of commercial chromium, which is one of industry's most versatile elements and also one of the nation's most important strategic materials. There is no domestic mine production of chromite, and the U.S. continues as one of the world's leading consumers.

The major consumer of chromium, mostly in the form of ferrochrome, is the steel industry. It is used in such diversified products as stainless, tool, and alloy steels; heat and corrosion resistant materials; and special purpose alloys. Chromium is required in the manufacture of most super-alloys used in nuclear reactors, rocket and jet engine parts, pollution control equipment, and oil refining.

The three chromite-consuming industries are: metallurgical, which accounted for an estimated 57 percent of the chromite used in 1981; chemical, which used 25 percent; and the refractory industry, which used 18 percent. Domestic consumption of chromite in 1981 was 3 percent lower than in 1980 largely reflecting weak demand in the steel industry, according to the U.S. Bureau of Mines. Consumption decreased 5 percent in the metallurgical industry; 6 percent in the refractory industry; but increased 1 percent in the chemical industry. Production of chromium alloys during 1981 decreased 5 percent from the 1980 level.

U.S. imports of chromite in 1981 were 9 percent lower than in 1980. The Republic of Africa was the source of 54 percent of U.S. imports, the Soviet Union accounted for 12 percent and the Philippines for 16 percent of 1981 imports of chromite. Imports of ferrochromium in 1981 were 45 percent higher than in 1980, most of which consisted of high-carbon material, primarily from the Republic of South Africa. Low-carbon ferrochromium accounted for 11 percent of the total ferrochromium imports, and they also came mostly from the Republic of South Africa.

On November 15, 1981, the President announced his decision to extend the current import relief provisions on high-carbon ferrochromium for one additional year. This extension keeps the special import duty at the 4.625 cents per pound rate that has existed since 1978 until November 16, 1982. The duty is applied to imports which enter the United States below a 38 cents "break-point price." However, prevailing market prices in late 1981 were quoted at 47.5 cents per pound.

U.S. industry stocks of chromite at the end of 1981 were 656,297 short tons vs. 674,191 tons a year earlier. However, U.S. producer stocks of chromium ferroalloys and metal on December 31, 1981 were 35 percent higher than at the end of 1980. As of November 30, 1981, the U.S. government stockpile inventory of chromite (mostly metallurgical grade) was below, and chromium ferroalloys, above the stockpile goal.

World Mine Production of Chromite In Thousands of Short Tons

Year	Albania	Brazil	Cuba	Finland	Greece	India	Japan	Pakistan	Philippines	Zimbabwe	Turkey	South Africa	Iran	USSR	Madagascar	World Total[1]
1971	553		22		16	288	35	27	474	600	665	1,812	194	1,980		7,093
1972	615		22		24	325	27	29	385	600	435	1,635	198	2,040		6,725
1973	674		22		20	317	26	19	640	600	481	1,818	154	2,100		7,381
1974	788	119	22	182	11	437	29	11	584	650	734	2,069	193	2,150	172	8,224
1975	859	191	35	365	39	551	26	11	573	650	790	2,288	190	2,290	214	9,136
1976	915	205	21	193	38	443	24	12	475	952	640	2,656	176	2,300	244	9,362
1977	970	342	22	186	46	389	20	9	593	747	560	3,372	257	2,400	182	10,163
1978	1,090	297	32	196	44	293	10	12	592	527	415	3,466	218	2,550	152	9,963
1979	1,120	375	31	195	60	341	13	13	618	597	500	3,634	150	2,650	141	10,511
1980[2]	1,190	385	35	193	68	352	15	3	631	611	440	3,764[1]	90	2,700	165	10,725
1981[1]				180					600	580	410	3,400				9,900

[1] Estimate. [2] Preliminary. *Source: Bureau of Mines*

U.S. Salient Statistics of Chromite In Thousands of Short Tons

						Consumption by Primary Consumer Groups (Gross Weight)				Stocks, Dec. 31				
Year	Net Import Reliance as a % of Apparent Consumption	Shipments from Gov't Stockpiles	Exports	Imports (For Consumption)	Re-exports	Total	Metallurgical	Refractory	Chemical	Metallurgical	Refractory	Chemical	Total Stocks	$ Per Metric Tn. South Africa[2]
1971		268	35	1,299	145	1,093	720	193	180	667	233	119	1,019	25–27
1972		191	20	1,056	57	1,140	727	224	189	601	160	96	857	24–27
1973		285	21	931	34	1,387	920	261	206	339	154	104	597	34
1974		500	18	1,102	99	1,447	904	295	251	340	169	64	573	50
1975	91	418	139	1,252	45	881	532	183	166	701	154	97	952	35
1976	89	311	124	1,275	85	1,006	597	202	207	762	136	111	1,009	39
1977	91	517	187	1,293	61	1,000	578	208	214	900	174	264	1,338	59
1978	91	—	23	1,013	29	1,010	534	237	239	755	185	361	1,301	56
1979	90	—	27	1,024	28	1,209	774	193	242	416	161	330	907	56
1980[1]	91	—	6	982	44	968	573	155	240	219	134	322	675	55
1981[3]	90	—	71	896		935	547	145	243	173	120	363	656	55

[1] Preliminary. [2] Cr_2O_3, 44% (Transvaal). [3] Estimate. *Source: Bureau of Mines*

Coal

Total production of coal in the U.S. in 1981 was 807.8 million short tons, or 3 percent below the record 829.7 million mined in 1980, according to Department of Energy (DOE) data. Following the 72-day coal strike in the first half of 1981, coal production in the second half was at record-breaking levels. Output in the final 6 months of 1981 totaled 456.5 million tons, an increase of 10.9 percent over production of 411.6 million tons in the second half of 1980.

The 1981 output comprised 802.1 million tons of bituminous coal and lignite and 5.7 million of Pennsylvania anthracite. In 1980, bituminous coal and lignite production totaled 823.6 million tons, and anthracite output totaled 6.1 million tons. Bituminous coal and lignite production from January 1 through April 10, 1982 totaled 237,699,000 short tons, up 5.1 percent from production in 1981. Anthracite production from January 1 through April 10, 1982 totaled 1,768,000 short tons, up 10.7 percent from production in 1981.

Consumption in 1981 was affected by the increased demand by electric utilities, the major consumers of coal. During the first 10 months of 1981, electric power plants burned 496.1 million tons of coal, up 5.0 percent from 472.4 million tons during the comparable period in 1980.

Electric utility coal consumption (including bituminous, lignite, and anthracite but not petroleum coke use) increased 5 percent in 1981 to 596.2 million tons from 569.3 million in 1980, an increase of 26.9 million short tons.

Electric utility stocks of bituminous coal, coke, lignite and anthracite totaled 167.7 million short tons at the end of December 1981, compared with 183.0 million a year earlier.

Imports of bituminous coal in 1981 fell by 0.151 million tons to 1,043 million tons, down 15 percent from 1980 imports.

Foreign Trade

A significant share of the increased U.S. coal production in the second half of 1981 was influenced by increased coal exports. U.S. coal exports in 1981 totaled 112.5 million short tons, 20.8 million short tons, or 22.7 percent, higher than the amount exported in 1980. Coal exports in 1981 were principally to Europe (50.2 percent), Japan (23.0 percent), and Canada (16.2 percent).

The Outlook for Coal

Prospects for demand for coal in 1982 were clouded by uncertainties regarding the longer term outlook for the U.S. economy. Electric utilities, the largest industrial consumer of coal, were expected to face the effects of the recession-related decline in industrial demand for electricity, and historically high interest rates. But, the anticipated mid-1982 improvement in the U.S. economy and the simultaneous de-

World Production of Coal (Bituminous & Lignite) In Millions of Short Tons

Year	Australia	Belgium	Canada	Czechoslovakia	France	W. Germany	India	Japan	China	Poland	South Africa	Un. Kingdom	United States	U.S.S.R.	World Total
1971	79.8	12.1	18.4	125.1	39.4	244.1	82.8	37.5	432	198.4	64.7	162.2	560.9	790.0	3,385
1972	91.9	11.6	20.7	125.0	36.1	241.3	85.8	31.6	442	208.2	64.4	131.7	602.5	805.4	3,423
1973	94.1	9.7	22.6	120.2	31.4	238.1	89.5	25.0	472.0	215.9	68.7	143.5	598.6	735.9	3,399
1974	99.6	6.7	22.3	122.0	21.7	235.4	96.1	22.3	475.0	222.5	71.2	118.7	601.0	671.0	3,264
1975	104.9	6.6	27.9	126.9	22.3	229.4	108.9	20.9	495.0	233.1	74.8	139.1	648.4	688.2	3,418
1976	116.7	6.7	28.1	129.8	22.3	239.4	115.9	20.3	510.0	241.0	82.2	133.9	678.7	698.6	3,523
1977	118.6	7.8	32.6	133.6	22.2	222.3	114.6	20.2	524.0	250.0	97.9	133.0	688.6	708.8	3,593
1978[2]	126.6	7.3	24.8	136.2	21.8	226.2	115.9	20.1	628.0	257.5	97.2	132.0	653.8	711.0	3,687
1979[1]													776.3		
1980[1]													823.6		
1981[1]													802.0		

[1] Estimate. [2] Preliminary. *Source: Bureau of Mines*

Salient Statistics of the Bituminous Coal Industry in the United States

Year	Production				Value		Number of Mines	Thous. of Men Employed	Avg. Number of Days Worked	Net Tons Per Man	Imports	Exports to:			
	Underground (Million Net Tons)	By Augers (Million Net Tons)	By Stripping (Million Net Tons)	Total Production (Million Net Tons)	Total Million $	Avg. Per Ton $					(Thousands of Net Tons)	Grand Total (Thousands of Net Tons)	Canada (Thousands of Net Tons)	Europe (Thousands of Net Tons)	Asia (Thousands of Net Tons)
1971	276	17.3	259	552	3,905	7.07	5,149	145.7	210	18.02	111	56,633	17,565	16,403	19,705
1972	304	15.6	276	595	4,562	7.66	4,879	149.3	221	17.74	47	55,997	18,161	16,679	18,039
1973	299	15.7	277	592	5,050	8.53	4,744	148.1	227	17.58	127	52,870	16,231	14,253	19,381
1974	277	15.7	312	603	9,502	15.75	5,247	166.7	206	17.58	2,080	59,926	13,706	15,856	27,603
1975	293	40.7	315	648	12,472	19.23	6,168	189.9	232	14.74	940	65,669	16,735	18,972	25,943
1976	295	—384—		679	13,189	19.43	6,161	202.3	232	14.46	1,203	59,406	16,497	20,026	19,271
1977	266	—425—		691	13,705	19.82	6,077	221.4	210	14.84	1,647	53,687	17,000	N.A.	N.A.
1978	242	—423—		665	14,486	21.78	6,230	242.3	166	14.68	2,953	39,825	15,239	10,449	11,344
1979[1]	320	—456—		776	18,243	23.50	6,300	251.7	227	13.50	2,059	64,783	19,158	22,744	17,608
1980[2]	337	—487—		824	21,580	26.00	6,300	245.0	225	15.09	1,194	89,882	17,039	40,414	25,481
1981[2]				802							1,043	110,243	17,856	56,130	31,010

[1] Preliminary. [2] Estimate. *Sources: Bureau of Mines; Dept. of Commerce*

cline in some interest rates was expected to help demand for coal. The export outlook was likely to be influenced by the extent of foreign economic recoveries and by the exchange value of the U.S. dollar. Over-all, a slight mid-1982 improvement in demand for coal appeared likely.

Reserves

The U.S. has the largest proven coal reserves of any nation on earth (in excess of 400 billion short tons, according to DOE estimates). These reserves, sufficient to meet domestic energy needs for centuries, have become the focal point of increasing attention as concern about U.S. dependence on imported petroleum has grown. A variety of technical problems have prevented switching from petroleum to coal as a source of energy on a large scale. Among the most important issues are: environmental problems relating to both the production and burning of coal, such as reclamation of abandoned strip mines and the installation of scrubbers on utility smoke stacks, and the full-scale development of economical liquification and gasification processes.

United States Production of Coal by Principal States In Millions of Short Tons

Year	Anthracite	Bituminous													
	Pennsylvania	Alabama	Colorado	Illinois	Indiana	Kentucky	Montana	Ohio	Pennsylvania	Virginia	West Virginia	Tennessee	Wyoming	Total Bituminous	Total U.S.
1971	8.7	17.9	5.3	58.4	21.4	119.4		51.4	72.8	30.6	118.3	9.3		552.2	560.9
1972	7.1	20.8	5.5	65.5	25.9	121.2		51.0	75.9	34.0	123.7	11.3		595.4	602.5
1973	6.8	19.2	6.2	61.6	25.3	127.6		45.8	76.6	34.0	115.4	8.2		591.7	598.5
1974	6.6	19.8	6.9	58.2	23.7	137.2		45.4	80.5	34.3	102.5	7.5		603.4	610.0
1975	6.2	22.6	8.2	59.5	25.1	143.6	22.1	46.8	84.1	35.5	109.3	8.2	23.8	648.4	654.6
1976	6.2	21.5	9.4	58.2	25.4	144.0	26.2	46.6	85.8	40.0	108.8	9.3	30.9	678.7	684.9
1977	5.9	21.5	12.0	53.5	27.8	146.3	27.2	47.9	84.6	37.6	95.4	9.4	46.0	691.3	697.2
1978	6.2	20.6	13.8	48.6	24.2	135.7	26.6	41.2	81.5	31.9	85.3	10.0	58.3	665.1	671.3
1979[2]	4.8	23.9	18.1	59.5	27.5	149.8	32.5	43.5	89.2	37.0	112.4	9.3	71.8	776.3	781.1
1980[1]	6.1	26.4	18.8	62.5	30.9	150.1	29.9	39.4	87.1	41.0	121.6	9.9	94.9	823.6	829.7
1981[1]	5.7													802.0	807.7

[1] Estimate. [2] Preliminary. *Source: Bureau of Mines*

U.S. Consumption & Stocks of Bituminous Coal & Lignite In Millions of Short Tons

Year	Stocks—Dec. 31						Consumption						
	Electric Power Utilities	Oven Coke Plants	Steel & Rolling Mills	Other Industrials	Producers & Distrib.	Total	Electric Power Utilities	Coke Plants		Steel & Rolling Mills	Other Industrials	Retail Deliveries[2]	Total
								Beehive	Ovens				
1971							326.3	1.3	81.5	5.6	68.7	11.4	494.9
1972							348.6	1.1	86.2	4.9	67.1	8.7	516.8
1973						103.1	386.9	1.3	92.3	6.4	60.8	8.2	556.9
1974						95.2	390.1	1.3	88.4	6.2	57.8	8.8	553.0
1975	109.7	8.7	— 8.5—			126.9	403.2	1.1	82.1	2.7	59.8	7.3	557.5
1976	116.4	9.8	— 7.1—			133.3	447.0	.9	83.4	2.7	57.8	6.9	598.8
1977[1]	130.9	12.7	—11.0—			154.7	475.7	.6	76.7	3.2	57.1	7.0	620.5
1978[1]	126.0	8.2	— 9.0—			143.2	480.2	.5	70.6	——62.2——		7.9	621.3
1979[1]	156.4	10.0	—11.6—		20.3	178.1	526.0	——77.0——		——67.1——		7.1	677.3
1980[3]	178.3	9.0	—11.8—		23.9	199.1	568.2	——66.5——		——59.3——		4.9	699.1
1981[3]	160	7	—10 —			175	590	——60 ——		——61 ——		5	716

[1] Preliminary. [2] To other consumers. [3] Estimate. *Source: Bureau of Mines*

U.S. Stocks of Bituminous Coal for All Industrial & Retail Dealers, at End of Month In Million Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1971	86.3	85.8	89.5	97.1	102.9	107.1	102.8	111.4	117.0	100.4	85.6	90.0
1972	92.9	93.6	97.9	103.7	110.6	114.5	109.7	112.9	114.3	118.0	119.2	116.5
1973	111.1	108.9	111.5	112.6	116.9	110.0	107.5	106.9	106.2	107.5	107.1	102.2
1974	97.8	95.8	101.6	107.2	112.9	111.9	106.2	105.5	109.2	118.7	109.2	95.5
1975	95.5	97.0	97.8	102.7	109.7	114.9	109.1	108.5	111.9	120.3	125.8	127.2
1976	119.2	119.0	123.5	128.4	136.0	140.1	129.7	123.9	129.9	133.6	135.0	133.6
1977	118.1	114.4	122.6	129.9	137.7	146.0	137.5	136.8	145.3	158.5	173.3	154.9
1978	120.2	95.0	85.3	98.3	112.4	124.7	121.3	124.3	127.4	135.3	144.8	143.6
1979[1]	131.9	125.1	130.0	137.7	147.0	150.6	144.1	148.1	153.7	167.2	176.1	178.4
1980[1]	175.8	173.1	173.0	180.3	189.9	195.1	181.7	181.3	190.0	197.3	199.6	199.1
1981[1]	193.6	192.9	201.7	181.6	161.6	152.5	148.4	151.0	158.7			

[1] Preliminary. *Source: Bureau of Mines*

Bituminous Coal Production[1] in the United States In Millions of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1975	55.2	51.8	52.6	53.8	55.9	56.2	46.0	51.8	56.1	60.4	54.0	54.8	648.4
1976	52.6	53.8	60.9	59.1	57.9	59.7	44.3	53.6	60.6	59.0	58.8	58.4	678.7
1977	44.7	49.2	66.8	60.5	62.5	63.1	49.6	57.8	69.5	67.7	69.0	31.0	691.3
1978	23.1	23.5	38.8	59.5	68.8	65.6	53.6	64.4	57.8	69.9	69.2	59.6	655.1
1979	56.5	53.6	65.5	62.8	67.9	69.4	54.5	72.1	63.9	75.9	67.6	60.3	776.3
1980[2]	67.8	64.3	69.9	69.9	70.4	71.4	60.7	70.2	68.3	71.7	68.1	71.6	823.6
1981[2]	65.3	70.0	77.3	36.9	37.3	61.9	73.3	78.2	79.8	82.7	72.0	67.2	802.0

[1] Includes small amount of lignite. [2] Preliminary. *Source: Bureau of Mines*

Average Wholesale Price of Anthracite Coal (Chestnut—F.O.B. Mine) Index—1967 = 100[1]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct	Nov.	Dec.	Average
1977	46.550	46.550	46.550	46.550	46.550	46.650	46.650	46.579	46.579	46.579	46.579	46.579	46.579
1978	46.579	46.579	46.579	46.579	—	47.192	47.192	47.498	47.542	47.537	47.530	47.675	47.135
1979[1]	46.677	47.677	47.677	407.3[1]	407.6	407.6	407.6	409.7	413.8	413.8	418.6	423.7	411.0
1980	435.6	435.7	435.7	459.7	459.7	459.7	462.1	469.8	478.2	479.6	491.1	497.9	463.7
1981[2]	508.7	542.9	542.8	545.2	552.8	565.1	582.9	595.3	620.5	629.1	642.5	643.7	581.0
1982[2]	643.7	643.7											

[1] Prior to Apr. 1979 data are in DOLLARS PER SHORT TON. [2] Preliminary. *Source: Bureau of Labor Statistics* (0511-0101.02)

Average Wholesale Price of Bituminous[1] Coal (Screenings, Industrial Use) Index—1967 = 100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1975	435.9	415.4	391.8	390.8	389.6	386.0	382.0	377.3	372.4	370.2	363.0	370.1	387.0
1976	368.9	368.0	366.9	366.1	366.4	365.4	366.5	366.6	366.8	367.2	368.0	373.0	367.5
1977	375.2	376.5	377.9	379.0	386.0	389.5	392.1	393.3	394.2	397.7	400.0	401.4	388.6
1978	403.2	404.4	406.5	426.4	432.4	434.5	437.2	441.9	442.9	444.1	442.4	444.0	430.0
1979	443.8	444.2	445.5	447.4	451.2	452.4	452.0	454.6	452.8	454.9	455.6	458.7	451.1
1980	459.1	459.4	461.6	464.4	465.9	465.9	466.7	467.8	470.2	469.6	474.0	473.8	466.5
1981[2]	476.0	477.9	478.3	483.4	484.4	488.6	502.3	503.6	506.2	506.4	508.0	510.6	493.8
1982[2]	521.4	524.5											

[1] Prices are for Screenings, industrial use, f.o.b. mine. [2] Preliminary. *Source: Bureau of Labor Statistics* (0512)

Statistical Trends in the Pennsylvania Anthracite Industry

	Production (Millions of Net Tons)					Stocks (Dec. 31) (1,000 Net Tons)		Exports to: (1,000 Net Tons)								
Year	Total	By Stripping	Loaded Mech. Under.	Value of Production Million $	Avg. Value Per Net Ton	Electric Utilities	Prod. & Distrib.	Total	Canada	France	Netherlands	Italy	Apparent Consumption	Avg. No. of Men Working Daily (1,000)	Avg. Number of Days Worked	Avg. Tons Per Man Per Day
1975	6.2	2.6	.3	198.5	32.26	982	59	640	544	39	16	11	5,106	3.9	214	7.45
1976	6.2	3.0	.3	209.2	33.92	1,000	33	615	445	105	16	—	5,040	3.7	235	7.19
1977	5.9	3.1	.4	202.4	34.86	2,321		625	526	20	—	33	4,803	3.7	229	6.97
1978	5.0	3.0		177.6	35.25	2,178		869	405				3,895	3.5	223	6.51
1979[1]	4.8					3,274	559	1,233	341	162	82	19	3,238			
1980[1]	6.1					4,741	432	1,795	421	266	127	19	3,671			
1981[1]	5.7					5,000	400	2,249	361	77	22	—				

[1] Preliminary. *Source: Bureau of Mines*

Pennsylvania Anthracite Coal Production[1] In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1975	540	535	544	270	535	544	455	535	500	560	555	630	6,203
1976	525	440	525	520	555	610	490	590	515	490	493	475	6,228
1977	390	420	484	553	476	479	474	479	471	587	513	535	5,861
1978	350	430	525	520	540	625	555	550	560	535	530	440	6,160
1979	343	285	396	406	430	411	343	435	401	493	469	423	4,835
1980[2]	470	350	460	510	500	495	525	425	478	567	525	470	6,056
1981[2]	305	472	548	463	240	477	566	534	417	562	676	485	5,745

[1] Represents production in Pennsylvania only. Production outside which is small, is included in Bituminous Production series.
[2] Preliminary. *Source: Bureau of Mines*

Cobalt

Cobalt is considered a critical material because of its uses as a high-temperature alloy in jet engines, and in metal cutting and mining tools. It is also viewed as a strategic material because the U.S. is heavily dependent upon foreign sources of supply which are concentrated in a few areas of the world.

Domestic and world demand for cobalt in 1981 declined further from the relatively low levels of 1980, according to the U.S. Bureau of Mines. Domestic consumption, excluding those companies which report annually, declined 23 percent in 1981 from the 1980 level, with reduced consumption particularly apparent in superalloy, magnetic alloy, and tool steel applications. U.S. consumer stocks of cobalt at the end of 1981 were 40 percent smaller than a year earlier as high interest rates and minimal demand pressured consumers to maintain a low inventory position.

Net import reliance of the U.S. for cobalt represented about 91 percent of apparent consumption in 1981, according to a U.S. Bureau of Mines estimate. Recycled cobalt from purchased scrap accounted for the remainder of consumption. Total imports of cobalt for 1981 were about 4 percent below 1980 imports. Major sources of imports were: Zaire (27 percent); Canada (12 percent); Norway (10 percent); Japan (10 percent), and Zambia (10 percent).

According to the U.S. Bureau of Mines, worldwide surplus market conditions for cobalt were expected to prevail in 1982. Development of additional capacity, especially in African nations, could heighten the oversupply situation unless production declined.

Zaire's state-owned metal marketing organization, SOZACOM, reduced the price of cobalt from $25 per pound (a price which had prevailed since February 1979) in March 1981. The price continued to decline throughout the year, to $17.26 in September, at which price it remained until it was reduced to $12.50 per pound, effective February 1, 1982. However, merchant prices dropped to below $10 per pound.

The General Services Administration (GSA) purchased 2,600 tons (5.2 million pounds) of cobalt in June 1981 for the National Defense Stockpile. Zaire was to supply the entire amount at a price of $15 per pound, with deliveries beginning late in the year. This acquisition was expected to bring the stockpile inventory of cobalt up to nearly 54 percent of the 42,700 short ton (85.4 million pound) goal. The GSA purchase represented about 8 percent of the estimated 1980 world mine output of cobalt, of which Zaire produced the greatest share.

World Mine Production of Cobalt In Short Tons of Contained Cobalt

Year	Australia	Zaire (Congo Repub.)	USSR	France (Metal)	Canada	Cuba	Philippines	Finland	W. Germany (Metal)	Japan (Metal)	Norway (Metal)	Morocco	Zambia	New Caledonia	World Total
1971	877	16,003	1,750	635	2,161	1,700	N.A.	1,400	662		958	1,078	2,330	N.A.	27,299
1972	849	14,453	1,800	853	1,676	1,700	N.A.	1,400	504		353	1,766	3,687	N.A.	27,376
1973	848	16,625	1,850	922	1,672	1,800	45	1,400	408		1,005	1,567	3,460	1,900	29,268
1974	1,188	19,436	1,900	848	1,724	1,800	33	1,400	392	11	1,365	1,793	2,622	2,113	34,045
1975	2,986	15,400	2,000	848	1,492	1,800	129	1,545	375	53	852	2,162	2,627	3,770	34,000
1976	600	12,100	2,000	799	1,495	1,800	542	1,409	276	568	635	1,030	2,398	90	23,609
1977	1,100	11,200	2,100	939	1,637	1,800	1,195	1,353	441	1,205	777	1,119	1,878	120	23,682
1978	1,500	14,660	2,150	998	1,360	1,800	1,313	1,429	386	2,055	575	1,250	2,274	170	28,214
1979	1,700	16,535	2,000	850	1,522	1,900	1,366	1,281	424	2,924	1,051	1,059	3.501	230	31,628
1980[2]	1,760	17,100	2,250	1,000	1,767	1,900	1,400	1,400	440	3,140	1,050	1,100	3,648	200	32,965
1981[1]	1,700	15,000			1,500		1,500	1,300				1,000	2,700	200	29,400

[1] Estimate. [2] Preliminary. *Source: Bureau of Mines*

U.S. Salient Statistics of Cobalt In Thousands of Pounds of Contained Cobalt

					Consumption By End Uses											
Year	Net Import Reliance as a % of Apparent Consumption	Cobalt Pdt's Production	Consumer Stocks Dec. 31	Imports for Consumption	Steel Full Alloy	Stainless & Heat Resisting	Catalysts[4]	Super-Alloys	Tool Steel	Magnetic Alloys	Nonferrous Allows	Drier in Paints, etc.[5]	Cutting & Wear-Resistant Mater.	Welding & Hard Facing Rods	Total	Price $ Per Pound[3]
1971		3,220	1,411	10,912	196	50	919	1,983	318	2,278	532	2,744	1,230	246	12,500	2.2–2.45
1972		3,142	1,193	13,915	217	39	1,245	3.012	361	3,441	651	2,691	1,273	199	14,130	2.45
1973		4,119	2,451	19,238	226	32	1,793	3,282	518	4,302	789	3,569	2,511	391	18,741	2.45–3.3
1974		4,636	2,047	16.122	249	39	1,905	4,090	690	3,457	780	3,635	2,578	423	18,861	3.1–3.75
1975	98	2,960	1,801	6,608	207	32	421	1,494	233	2,024	669	1,964	1,276	298	12,787	3.75–4
1976	98	4,608	3,180	16,487	251	37	1,446	1,772	151	3,521	742	3,089	1,385	454	16,482	4–5.40
1977	97	4.563	3,738	17,548	354	72	1,285	3,097	231	3.466	624	2,883	1,256	376	16,577	5.20–6.40
1978	95	6,341	4,387	19,029	250	135	1,623	4,299	379	3.768	590	5,399	1,837	725	19,994	6.40–20
1979	94	4,212	3,390	19,998	227	137	1,882	5,276	413	3,266	392	1,791	2,123	444	17,402	20–25
1980[1]	93	3,274	2,540	16,302	116	47	1,656	6,285	321	2,267	150	1,406	1,344	620	15,321	25
1981[2]	91		1,460	14,000	121	35	1,288	4,073	135	1,678	86	1,380	1,005	428	14,686	17–25

[1] Preliminary. [2] Estimate. [3] 97 to 99% cobalt, per contract. [4] Prior to 1976 are for chemical & ceramics. [5] Prior to 1979 are for salts & driers. *Source: Bureau of Mines*

Cocoa

World cocoa bean production for the 1981/82 season ending September 30, 1982 was estimated by the USDA in March 1982 at a record-large 1.72 million tonnes, up slightly from the 1980/81 output of 1.69 million tonnes. Estimated smaller harvests in Brazil, Cameroon, Ecuador, and Ghana were more than offset by forecast record crops in the Ivory Coast and Malaysia, and by a modest recovery in Nigerian production. With new plantings coming into bearing in the Ivory Coast, Brazil, and Malaysia, the outlook is for continued large world cocoa crops for years.

World cocoa bean grindings in calendar year 1981, estimated by the USDA at 1.58 million tonnes, were forecast to increase by 2.5 percent in 1982 reflecting ample cocoa supplies and lower sugar prices. Poor global economic conditions and the widespread use of cocoa substitutes and extenders were expected to prevent a more rapid expansion of cocoa use.

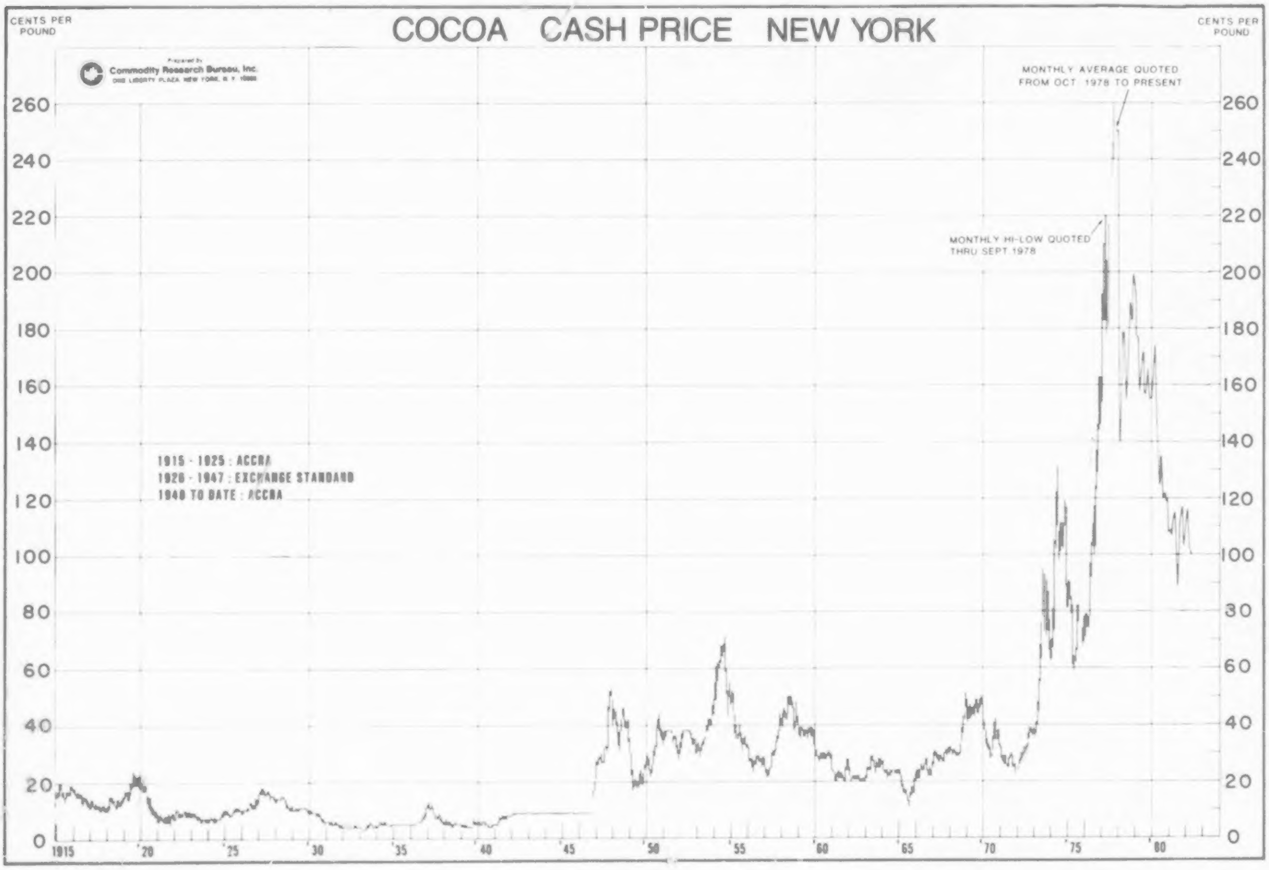
World cocoa bean stocks were expected by the USDA to increase in the 1981/82 season (by about 79,000 tonnes), for the fifth consecutive season. Because world consumption is expected to lag behind the expansionary trend in production during the next several years, global cocoa bean stocks are likely to remain at relatively high levels.

Calendar year 1981 U.S. imports of cocoa beans were about 63 percent above the 1980 level as product/cocoa price ratios favored the import of beans. U.S. imports of cocoa butter and powder increased by 25 percent and 19 percent, respectively, over 1980 imports. Cocoa liquor imports decreased 24 percent from the 1980 level.

After reaching a 5-year low in June, world cocoa prices rallied for a time on the news that the International Cocoa Agreement (ICCA) would be provisionally placed in effect on August 1, 1981. After several months of operation, the ICCA, through its buffer stock purchases, has been unable to lift prices to its $1.10 per pound ($2,425 per tonne) floor price despite the purchase of 100,000 tonnes of cocoa by late March 1982. The floor price was then dropped to $1.06 per pound ($2,337 per tonne). As the USDA has pointed out, the continued operation of the ICCA depends on three points: (1) obtaining additional financing for buffer stock purchases; (2) increasing the levy on exports to a higher level than the 2 cents per pound due to be effective October 1, 1982; and (3) the willingness of producing countries to sell cocoa to the buffer stock manager on a deferred payment basis. An additional problem is that neither the world's largest producer (the Ivory Coast) nor the largest consumer (the United States) are members of the pact.

Futures Markets

Cocoa futures are actively traded on the Coffee, Sugar & Cocoa Exchange, Inc. in New York; and on the London Terminal Market.



COCOA

World Cocoa Supply and Demand In Thousands of Metric Tons

Crop Year[1]	Stocks Oct. 1	Net World Crop[2]	Total Availability	Seasonal Grindings	Closing Stocks	Stock Change	Crop Year[1]	Stocks Oct. 1	Net World Crop[2]	Total Availability	Seasonal Grindings	Closing Stocks	Stock Change
1970–1	500	1,484	1,984	1,415	569	+ 69	1977–8	271	1,487	1,758	1,396	362	+ 91
1971–2	569	1,567	2,136	1,515	621	+ 52	1978–9	362	1,468	1,830	1,442	388	+ 26
1972–3	621	1,383	2,004	1,602	402	−219	1979–0	388	1,600	1,988	1,478	510	+122
1973–4	402	1,434	1,836	1,513	323	− 79	1980–1[3]	510	1,649	2,159	1,556	603	+ 93
1974–5	323	1,532	1,855	1,439	416	+ 93	1981–2[4]	603	1,709	2,312	1,614	698	+ 95
1975–6	416	1,495	1,911	1,526	385	− 31	1982–3[4]	698					

[1] Crop year season is OCT.–SEPT. [2] The Net World Crop is obtained by adjusting the Gross World Crop for one per cent loss in weight. [3] Preliminary. [4] Forecast. *Source: Gill and Duffus, Ltd.*

World Production of Cocoa Beans in Principal Producing Countries In Thousands of Metric Tonnes

Crop Year[1]	Brazil	Colombia	Dominican Rep.	Ecuador	Equatorial Guinea[4]	Cameroon	Ghana	Ivory Coast	Nigeria	Sao Tome & Principe	Trinidad & Tobago	Venezuela	Asia & Oceania	World Total
1970–1	182	21	25	61	30.0	111.7	392.0	180	308	10.4	4.1	18.9	44	1,499
1971–2	167	22	41	67	22	123	464	226	255	10.0	5	17	45	1,583
1972–3	162	23	28	43	10	107	418	181	241	11	5	19	40	1,397
1973–4	246	23	30	72	12	110	350	209	215	10	4	17	53	1,448
1974–5	273	25	27	78	13	118	377	242	214	7	5	19	57	1,547
1975–6	258	26	30	63	10	96	397	231	216	8	3	15	60	1,510
1976–7	234	29	30	72	6	82	320	230	165	6	4	15	60	1,339
1977–8	283	29	30	75	6	108	268	304	205	6	4	18	64	1,502
1978–9	314	31	33	90	6	106	250	312	137	5	3	17	72	1,483
1979–0	294	30	27	98	6	124	280	379	169	5	2	17	79	1,616
1980–1[3]	354	39	32	81	8	120	258	412	155	5	2	14	87	1,666
1981–2[2]	345	42	30	85	10	110	265	450	170	5	2	15	90	1,726

[1] Crop years are for the 12 months October 1 to September 30. [2] Forecast. [3] Preliminary. [4] Includes Fernando Po & Rio Muni. *Source: Gill & Duffus, Ltd.*

Raw Cocoa Grindings in Selected Countries In Thousands of Metric[2] Tons

Year	Total	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
	France					Germany (West)					Holland				
1969	42.4	11.9	11.4	8.2	10.9	120.3	34.5	25.8	26.3	33.7	108.9	28.7	25.5	25.8	28.9
1970	38.9	10.1	9.6	8.3	10.9	123.8	31.8	29.2	28.6	34.2	113.0	27.9	26.7	29.0	29.4
1971[2]	41.7	10.7	10.8	8.9	11.4	132.9	33.7	30.6	30.8	37.8	120.6	31.1	28.0	27.8	33.7
1972	48.0	11.0	12.2	10.1	14.7	138.8	34.4	32.6	31.6	40.2	124.4	31.9	31.1	28.5	33.1
1973	47.3	14.5	12.9	8.7	11.1	152.4	41.0	39.5	33.8	38.0	122.6	33.2	31.1	26.3	32.0
1974	36.9	11.1	9.5	7.4	9.0	138.2	37.1	31.8	30.8	38.5	114.9	33.4	28.0	23.0	30.4
1975	34.3	9.7	9.1	6.9	8.6	139.0	40.1	34.0	30.0	34.8	119.4	33.3	27.4	26.5	32.2
1976	35.7	10.1	9.5	7.2	8.8	140.6	36.2	35.2	30.6	38.6	127.3	34.6	31.8	25.9	35.1
1977	36.3	10.7	10.5	7.5	7.7	142.3	38.3	32.3	30.5	41.2	126.1	34.9	32.0	26.6	32.6
1978	40.0	10.8	10.9	7.3	10.9	143.6	39.8	34.7	30.3	38.8	125.9	34.0	31.5	26.7	33.8
1979	43.2	11.5	11.5	8.8	11.4	142.3	37.6	34.8	30.3	39.5	127.5	35.4	29.3	29.8	33.0
1980	43.1	12.5	10.9	9.1	10.7	151.2	40.2	35.4	32.9	42.6	132.6	35.1	31.4	29.5	36.7
1981[1]		12.6	12.0	9.6		159.4	41.7	37.6	35.4	44.7	141.0	36.0	34.3	32.7	38.0
	Italy					United Kingdom					United States				
1969	41.8	11.6	11.4	7.2	11.7	90.9	23.8	25.1	20.1	21.9	264.8	68.3	65.2	63.2	68.1
1970	41.7	11.5	10.4	9.6	10.3	81.1	21.0	21.0	17.7	21.4	261.3	64.2	69.0	60.9	67.2
1971[2]	39.7	9.2	9.3	10.4	10.8	84.4	20.5	20.2	18.6	25.1	279.0	65.3	67.9	66.8	78.9
1972	40.6	9.8	8.7	9.8	12.3	97.7	22.0	24.2	24.2	27.3	289.0	79.3	66.1	63.2	80.4
1973	42.9	10.8	10.9	11.4	9.8	107.0	29.1	28.2	23.9	25.8	278.5	77.9	73.4	60.7	66.5
1974	36.3	12.8	8.2	5.1	10.2	93.1	27.7	25.9	21.4	18.0	229.6	67.6	58.8	54.5	48.7
1975	29.1	8.4	6.4	5.9	8.5	72.5	20.2	18.1	15.4	18.8	207.8	43.7	51.7	53.2	59.3
1976	35.4	8.6	9.0	7.8	9.9	83.0	22.3	21.6	17.9	21.2	225.3	60.9	55.0	55.0	54.5
1977	26.4	5.9	6.9	5.3	8.3	75.3	22.0	20.5	16.4	16.4	183.7	56.5	46.9	40.9	39.4
1978	30.1	7.0	8.5	6.3	8.2	72.4	21.0	19.0	15.9	16.5	162.7	42.0	38.4	36.9	45.3
1979	33.6	6.3	10.0	6.9	10.4	60.6	17.7	15.9	12.3	14.7	160.3	40.5	41.4	41.4	37.0
1980	33.8	8.0	8.4	8.1	9.3	65.3	15.5	16.1	15.5	18.2	142.2	33.5	31.5	34.9	42.4
1981[1]		8.6	8.1			86.4	21.4	21.3	20.2	23.5	190.2	48.4	46.0	48.8	47.1

[1] Preliminary. [2] Data prior to 1971 are in THOUSANDS OF LONG TONS. *Source: Gill and Duffus, Ltd.*

World Absorption (Consumption) of Cocoa[2] In Thousands of Metric Tonnes

Year	Japan	Australia	Belgium	Brazil	Canada	Colombia	France	W. Germany	Netherlands	Spain	Italy	Switzerland	USSR	United King.	United States	World Total
1972	36	16	20	90	19	36	48	144	124	31	41	18	132	98	289	1,567
1973	38	16	21	87	18	32	47	151	123	34	43	18	134	107	278	1,551
1974	30	16	22	104	16	31	37	151	115	36	36	17	143	93	230	1,490
1975	29	14	19	98	11	32	37	151	119	34	29	15	150	72	208	1,471
1976	32	16	19	116	13	31	39	153	127	38	35	16	140	83	225	1,536
1977	26	15	16	120	11	24	42	154	126	34	26	16	85	75	184	1,386
1978	21	12	15	136	11	24	44	155	126	32	30	14	90	72	163	1,409
1979	22	11	17	180	11	29	48	155	127	34	34	14	120	61	160	1,464
1980[1]	25	11	23	200	12	30	48	158	133	34	34	17	130	65	142	1,493
1981[3]	29	12	26	195	14	32	50	167	141	36	36	18	125	86	190	1,580

[1] Preliminary. [2] Figures represent the "absorption," "disappearance" or "grindings" of cocoa beans in each country—in other words, net imports of cocoa beans adjusted for changes in stock. [3] Estimate. *Source: Gill & Duffus, Ltd.*

Cocoa Outturns and Sales of the Bahia Crops In Thousands of Bags of 60 Kilos

Year	Outturns			Cumulative Sales of Cocoa Beans (Crop Year Ending April)											
	Main Crop (Oct.-Apr.)	Temporao Crop (May-Sept.)	Total	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1972	1,791	705	2,496	3,358	3,457	3,516	3,525	536	718	1,096	1,383	1,672	1,955	2,144	2,443
1973	2,376	1,515	3,891	2,547	2,638	2,667	2,680	988	1,272	1,637	1,808	1,864	2,015	2,136	2,356
1974	1,613	2,630	4,243	2,596	2,914	3,087	3,173	1,361	1,405	1,584	1,751	2,019	2,314	2,525	2,650
1975	1,899	2,091	3,990	2,762	2,870	2,963	3,078	1,314	1,666	2,342	2,699	3,098	3,790	3,928	4,091
1976	1,497	2,102	3,599	4,308	4,407	4,443	4,530	1,906	2,480	2,646	2,868	3,083	3,197	3,349	3,460
1977	1,887	2,524	4,411	3,534	3,526	3,498	3,477	1,629	1,894	2,276	2,455	2,717	2,933	3,154	3,275
1978	1,805	3,129	4,934	3,449	3,652	3,767	3,941	1,113	1,360	1,701	2,175	2,660	3,166	3,546	3,872
1979	2,257	2,383	4,640	4,155	4,212	4,273	4,304	1,959	2,436	2,966	3,378	3,805	4,091	4,533	4,739
1980[1]	2,658	2,892	5,550	5,008	5,145	5,206	5,387	1,306	1,646	2,257	2,791	3,390	4,093	4,361	4,605
1981				4,765	4,876	4,924	5,387	1,574	1,912	2,372					

[1] Preliminary. [2] Estimated. *Source: Gill and Duffus, Ltd.*

World Exports of Cocoa Beans by Principal Producing Countries In Thousands of Metric Tons

Year	Brazil	Costa Rica	Dominican Repub.	Ecuador	Equatorial Guinea	Cameroon	Ghana	Malaysia	Ivory Coast	Papua New Guinea	Nigeria	Sao Tome & Principe	Trinidad & Tobago	Venezuela	Togo	Grand Total
1973	82.8	4.7	23.0	30.0	6.4	84.2	373.8	6.5	143.0	22.6	213.9	11.8	3.4	9.9	17.7	1,089
1974	129.9	4.4	26.4	68.9	9.0	88.9	313.9	9.7	205.3	34.0	197.1	9.8	3.8	11.5	15.9	1,170
1975	176.6	5.4	22.3	37.8	3.0	72.5	322.2	11.8	167.5	30.5	194.7	5.2	4.8	14.4	16.2	1,125
1976	128.8	4.2	24.5	22.2	7.0	68.6	327.6	14.8	191.4	31.3	223.0	5.6	3.0	7.6	11.8	1,115
1977	107.6	5.1	25.6	20.1	5.0	56.8	249.1	13.6	158.5	29.4	167.5	6.1	3.2	7.4	19.6	919
1978	134.1	5.8	27.6	16.2	5.0	61.6	207.0	17.6	244.0	27.1	185.9	6.1	3.2	6.4	22.8	1,015
1979	156.9	4.2	25.6	13.2	5.0	61.1	200.0	24.2	170.8	28.1	113.0	8.2	2.7	6.8	10.1	880
1980[1]	123.6	2.2	23.4	14.1	6.0	80.5	218.6	30.3	230.9	28.8	133.9	7.6	2.1	6.5	12.1	973

[1] Preliminary. *Source: Foreign Agricultural Service, U.S.D.A.*

Confectionery Sales by Manufacturers in the United States In Millions of Dollars

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1973	184	172	182	154	143	135	114	183	233	227	234	180	2,141
1974	211	220	241	200	193	180	172	251	309	309	265	220	2,771
1975	246	250	221	207	202	183	168	245	300	316	251	241	2,830
1976	259	270	277	238	196	192	157	234	307	267	282	233	2,912
1977	282	342	353	265	243	237	171	268	412	348	336	330	3,587
1978	305	352	328	250	266	234	211	379	368	376	349	351	3,769
1979[1]	258	359	332	313	285	258	240	403	435	461	438	382	4,281
1980[1]	414	469	415	340	325	318	293	396	498	505	430	403	4,649
1981[1]	400	437	440	378	305	325	304	430	582	588	450	440	5,079

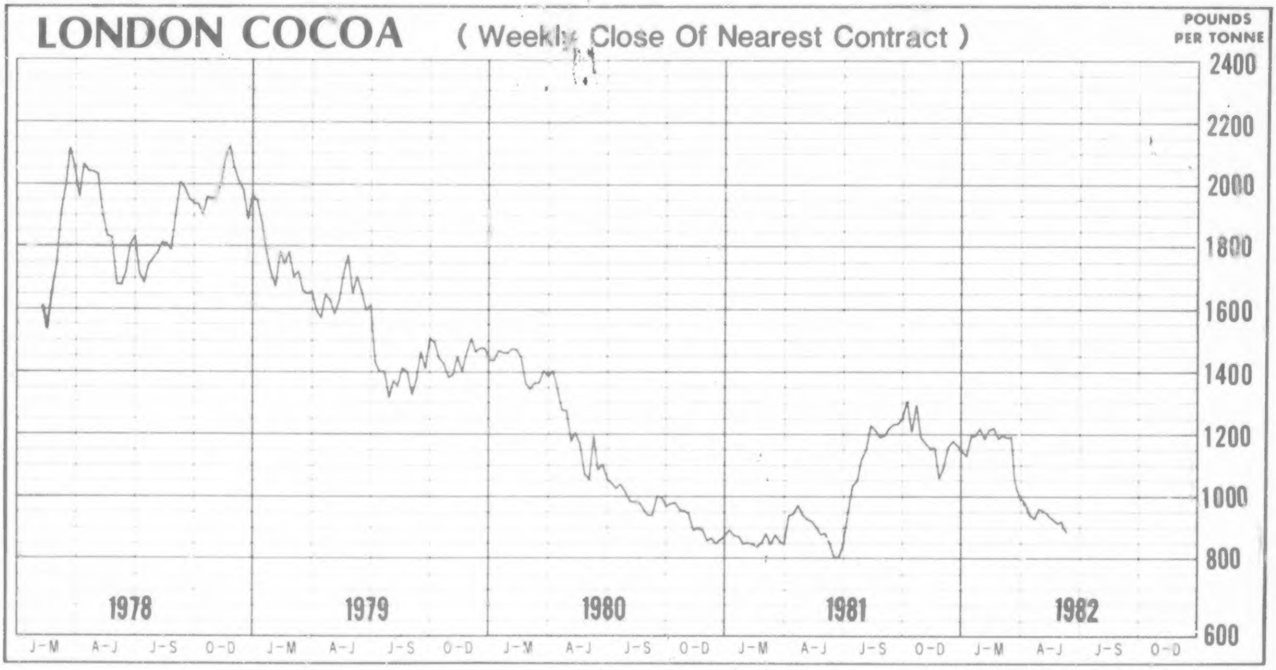
Compiled by the Department of Commerce from reports of over 200 manufacturers. The number reporting vary from month to month. Represents app. 70% of sales by all manufacturers of candy and competitive chocolate products. [1] Preliminary
Source: Dept. of Commerce

COCOA

United States Imports of Cocoa (Includes Shells) In Thousands of Long Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1975	20.5	17.3	21.7	17.9	17.4	18.7	16.6	12.5	17.4	21.5	18.6	33.0	233.0
1976	33.9	16.4	28.8	22.4	21.4	19.5	16.3	20.9	19.6	8.2	11.6	16.5	235.4
1977	30.6	21.5	19.0	16.1	[illegible]	13.6	10.9	10.8	6.2	8.1	4.7	5.5	172.1
1978	19.4	20.3	27.9	20.5	[illegible]	12.4	16.1	14.7	7.3	15.9	18.6	20.2	209.7
1979[1]	27.3	26.7	14.6	12.8	8.8	13.7	11.8	15.7	5.7	10.1	10.0	8.0	165.2
1980[1]	11.1	9.2	8.0	19.5	15.4	12.0	16.9	9.6	8.2	9.6	9.4	19.9	148.5
1981[1]	13.5	27.8	19.2	30.4	27.1	24.1	19.3	22.0	20.3	24.1	5.8	11.5	245.0
1982[1]	10.0												

[1] Preliminary. *Source: Department of Commerce*


LONDON COCOA (Weekly Close Of Nearest Contract)

Month End Open Interest of Cocoa Futures at New York In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.
1978	10,427	9,210	7,530	6,609	6,807	6,045	6,516	5,557	7,039	7,732	7,691	8,064
1979	7,782	6,506	6,587	6,135	7,392	6,833	6,792	6,415	6,262	7,562	7,050	6,840
1980	8,314	7,723	6,744	6,639	8,114	6,682	8,900	9,529	13,548	14,282	13,210	11,978
1981	14,269	14,064	16,209	13,721	13,929	11,853	16,328	16,897	17,042	18,823	15,388	14,137
1982	14,554	14,421	15,129	14,036								

Source: Coffee, Sugar & Cocoa Exch., Inc.

Volume of Trading of Cocoa Futures at New York In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	20,694	22,017	21,095	19,670	14,886	18,376	13,459	18,686	18,509	18,717	18,565	18,594	222,983
1979	19,447	17,626	16,430	14,784	21,063	23,282	18,160	21,125	16,929	25,555	22,321	15,099	232,183
1980	23,600	40,410	25,066	23,897	26,170	29,673	34,158	27,265	45,437	43,945	39,770	28,954	388,971
1981	32,916	43,352	37,056	52,875	32,691	54,479	55,525	53,557	43,764	63,751	53,674	39,011	265,560
1982	42,498	44,744	52,468	52,591									

Source: Coffee, Sugar & Cocoa Exch., Inc.

Spot Cocoa Bean Prices (ACCRA) in New York In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1975	89.5	88.8	84.8	75.5	59.5	62.5	73.0	78.0	77.5	77.5	68.5	76.0	75.9
1976	73.5	75.5	74.0	88.3	93.5	107.5	103.5	114.5	131.3	132.5	161.5	154.3	109.2
1977	173.0	190.3	207.5	198.3	199.3	199.3	199.3	199.3	256.0	250.0	250.0	250.0	214.4
1978	165.0	140.0	178.0	179.0	170.0	155.0	161.0	175.0	189.0	183.0	199.0	196.0	174.2
1979	193.0	177.0	176.0	157.5	165.0	172.0	158.0	157.0	166.0	159.0	154.5	155.0	160.4
1980	163.8	173.5	157.0	147.0	135.0	125.3	134.5	120.0	122.0	119.0	120.0	108.0	135.4
1981	109.0	110.0	112.0	115.0	104.0	89.0	109.5	112.0	117.0	113.0	103.0	109.0	108.5
1982	116.0	107.0											

Source: Bureau of Labor Statistics (0191-0221)

Visible Stock of Cocoa in New York Warehouses[1], at End of Month In Thousands of Bags

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1975	9.5	9.7	6.0	7.0	23.9	21.9	11.5	3.5	.5	.1	.1	.1
1976	.1	.1	.1	.1	3.0	.7	.7	.7	.7	.7	—	2.6
1977	1.7	1.3	1.9	.9	.9	14.6	47.3	44.6	13.4	5.6	4.9	8.8
1978	5.0	9.3	24.2	19.4	24.2	29.1	38.0	17.9	12.2	16.0	19.8	28.2
1979	35.2	33.6	31.1	31.4	40.2	44.2	125.5	127.5	104.7	101.7	90.0	87.3
1980	85.3	68.2	18.0	29.4	42.8	84.3	94.8	78.3	71.6	52.7	69.5	22.7
1981	37.5	14.9	29.3	66.5	120.3	93.1	75.8	115.3	84.6	62.1	55.5	66.2
1982	33.4	61.3	66.7	57.3								

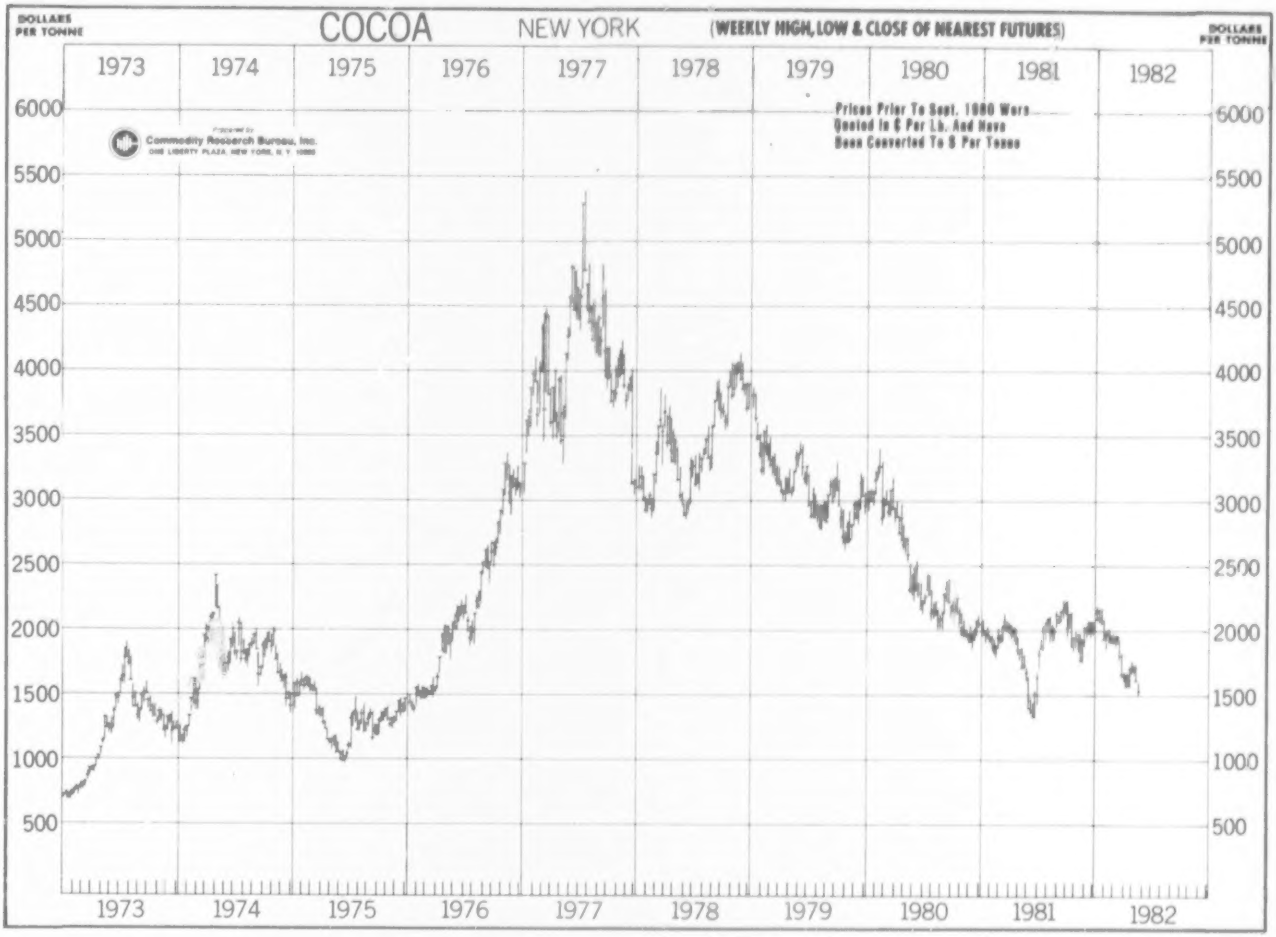
[1] In licensed & unlicensed warehouses of storage companies licensed by the Coffee, Sugar & Cocoa Exch. *Source: Coffee, Sugar & Cocoa Exch., Inc.*

Visible Stock of Cocoa in Philadelphia Warehouses, at End of Month In Thousands of Bags

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1975	22.6	19.1	16.2	23.8	42.2	26.0	24.5	15.7	16.4	9.5	13.7	20.1
1976	27.4	32.1	36.4	54.3	63.1	70.0	82.9	77.7	68.6	72.3	57.6	47.8
1977	47.8	62.2	61.2	25.5	22.5	23.4	18.2	16.3	10.6	4.1	.3	.2
1978	.2	.6	6.0	14.0	.5	.8	.8	.7	14.3	12.0	23.8	50.6
1979	60.4	77.7	107.7	114.4	110.6	101.7	100.2	124.1	132.5	106.3	81.3	86.3
1980	64.6	52.5	40.0	33.4	53.3	45.3	38.8	47.3	55.8	21.6	11.8	33.6
1981	38.1	15.5	15.4	45.7	189.7	227.4	246.6	255.8	307.5	271.9	234.6	231.3
1982	190.1	163.4	174.1	163.2								

Source: Coffee, Sugar & Cocoa Exch., Inc.

COCOA



High, Low & Closing Prices of March Cocoa Futures at New York In Dollars per Tonne[1]

Year of Delivery		Year Prior to Delivery											Delivery Year			Life of Delivery Range
		Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	
1978[1]	High	156.35	175.00	157.90	167.80	182.25	195.25	185.50	175.00	168.00	166.00	155.30	147.75	149.55	175.00	195.25
	Low	136.60	137.25	133.75	133.25	153.25	164.30	154.00	157.25	147.70	145.00	138.20	132.05	130.00	142.50	90.85
	Close	156.35	140.25	154.25	159.25	170.50	179.50	163.75	161.05	153.25	148.20	142.35	133.90	145.05	159.45	—
1979[1]	High	124.75	152.00	148.20	140.25	137.00	145.10	157.20	173.00	184.00	189.25	183.90	175.50	163.00	153.25	189.25
	Low	111.50	121.70	132.50	122.60	120.40	129.50	141.60	156.65	161.25	171.20	167.10	149.25	144.95	141.75	111.50
	Close	123.80	146.00	133.35	123.10	136.50	144.70	156.35	167.10	177.15	181.20	176.75	149.25	154.15	141.85	—
1980[1]	High	168.75	162.00	153.85	159.50	163.40	159.60	145.10	146.75	149.90	142.10	145.40	146.85	154.25	140.00	174.50
	Low	154.70	153.50	147.65	149.10	153.20	140.15	135.25	136.90	122.00	124.00	134.00	131.50	127.90	130.75	122.00
	Close	163.60	154.25	151.50	157.15	160.75	144.80	136.20	144.10	126.20	140.95	134.00	144.10	134.95	134.50	—
1981	High	3350	3245	3011	2830	2650	2562	2350	2454	2305	2217	2105	2084	2017	2075	3350
	Low	3085	2940	2785	2422	2385	2260	2210	2195	2121	1960	1905	1922	1795	1915	1795
	Close	3110	2960	2792	2425	2393	2275	2226	2220	2226	1965	2050	1944	1947	2025	—
1982	High	2260	2300	2250	2125	1920	2215	2290	2360	2292	2065	2085	2184	2020	1965	2360
	Low	2170	2190	2081	1890	1625	1808	2160	2196	1922	1816	1910	1942	1860	1780	1780
	Close	2224	2210	2130	1935	1720	2202	2263	2283	2005	1911	2054	1942	1924	1806	
1983	High	2145	2105	1875												
	Low	2071	1840	1738												
	Close	2071	1854	1802												

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[1] Prices prior to the 1981 delivery are in cents per pound. To convert to $ per tonne, multiply the ¢ per lb. by 2204.6. *Source: Coffee, Sugar & Cocoa Exch., Inc.*

Coconut Oil and Copra

Early in 1982, the USDA estimated 1981/82 world coconut oil production at 3.5 million tonnes, up from the estimated 3.3 million produced in 1980/81. The USDA's Foreign Agricultural Service also projected 1981/82 world production of copra at 5.39 million tonnes, one percent above the 1980/81 production.

During 1981, the usual large Philippine exports of coconut (and copra) oil were again supplemented in world markets by sizable Indonesian exports. Moreover, the Philippines introduced a policy of encouraging Filipinos to produce oil rather than export coconuts. A Philippine company signed with a West German company to construct a coconut oil chemical processing plant in the Philippines. Indonesia also appeared to inaugurate a shift toward increased domestic oil refining, and the exporting of refined oil. On the importing side, the key factors in 1981 were the large quantities of coconut oil imported by the U.S.S.R. and India, as well as the U.S. and EEC.

The U.S. was estimated to have imported 368,000 tonnes of coconut oil from the Philippines, in 1981, unchanged from the 1980 level.

Large U.S. and world vegetable oil stocks, and anticipated large 1982 U.S. and world oilseed production were expected to have a negative influence on coconut oil prices in 1982.

World Copra Production by Principal Countries In Thousands of Metric Tons

Year	Dom.-Rep.	Fiji	India	Indonesia	Jamaica	Malaysia	Mexico	Mozambique	Papua-New Guinea	Philippines	Solomon Isl.	Sri Lanka	Tanzania	Thailand	Vanuatu	Venezuela	Vietnam	Tons World Total
1972	25	28	346	942	16	190	140	63	132	2,169	26	256	27	36	18	17	23	4,581
1973	15	28	345	797	13	216	118	69	125	1,808	16	100	27	38	22	19	20	3,904
1974	16	27	339	801	15	202	135	64	137	1,376	29	109	27	39	35	18	23	3,514
1975	20	26	349	947	18	234	140	63	140	2,206	25	203	27	39	27	18	23	4,636
1976	20	29	354	1,216	20	231	125	83	113	2,715	24	157	27	43	36	18	23	5,366
1977	20	30	334	1,022	21	218	120	80	139	2,449	29	73	27	39	44	19	23	5,164
1978	21	27	332	1,262	24	207	135	75	141	2,468	28	131	27	40	47	19	23	4,591
1979	21	30	317	1,296	28	213	130	60	159	1,823	34	166	27	41	45	19	23	4,739
1980	21	30	333	1,394	29	210	110	60	145	1,931	30	93	27	45	50	20	23	5,132
1981[1]	21	30	337	1,331	25	208	120	60	138	2,331	30	138	27	45	50	20	23	5,055
1982[2]	21	30	340	1,389	28	200	120	60	150	2,558	30	140	27	45	50	20	20	5,357

[1] Preliminary. [2] Forecast. *Source: Foreign Agricultural Service, U.S.D.A.*

World Coconut Oil Exports by Principal Countries In Thousands of Metric Tons

Year	Sri Lanka (Ceylon)	Singapore[2]	Indonesia	Malaysia[2]	Philippines Registered	Sarawak[2]	Total Asia	Mozambique	EC-10	Fiji	Papua New Guinea	Total Oceania	World Total
1972	85	15	34	21	467	2	626	6	163	15	27	53	830
1973	18	5	17	25	426	4	494	10	125	18	28	58	679
1974	22	4	0	44	432	—	502	9	78	14	27	49	643
1975	69	11	27	35	593	—	732	4	213	16	27	61	986
1976	59	10	13	34	822			9	283	14	27	59	1,270
1977	2	11	0	25	789			5	196	18	29	57	1,131
1978	28	37	2	22	990			5	165	17	32	70	1,325
1979	34	42	41	66	795			4	133	18	30	75	1,186
1980	2	35	0	72	916				114	15	34		1,271
1981[1]	20	50	0	75	1,100				119	15	30		1,460
1982[3]	20	50		78	1,200				114		32		1,556

[1] Preliminary. [2] Net Exports. [3] Projected. *Source: Foreign Agricultural Service, U.S.D.A.*

Imports of Coconut Oil into the United States In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1972	22.0	144.6	67.9	27.3	70.4	58.2	53.1	47.0	31.7	67.0	37.3	50.4	677.0
1973	69.8	112.5	70.9	36.7	62.4	43.7	41.9	64.1	29.8	46.7	64.8	74.6	718.0
1974	24.3	25.3	45.0	48.2	35.3	26.5	93.2	24	55.0	78.4	44.8	41.7	542.3
1975	47.0	40.5	70.0	53.4	90.8	27.6	38.2	64.[illegible]	76.3	101.6	178.5	80.4	869.1
1976	100.7	142.9	64.5	93.2	95.1	66.7	102.1	110.4	111.3	98.0	77.9	144.1	1,207
1977	86.8	128.8	99.2	64.9	89.4	108.8	66.3	75.0	76.1	29.4	75.1	94.5	994.3
1978	65.5	127.1	102.9	72.4	98.3	79.9	104.5	83.7	47.0	80.4	100.7	60.1	1,023
1979[1]	167.2	83.7	87.7	55.6	52.6	70.3	44.5	86.4	77.4	86.6	92.1	75.7	979.8
1980[1]	75.1	50.1	42.7	102.8	39.3	62.8	58.7	67.7	56.5	126.7	90.9	116.0	889.3
1981[1]	110.1	139.2	79.1	39.8	90.5	81.2	107.8	55.9	84.7	86.3	76.3	86.2	1,037
1982[1]	82.5												

[1] Preliminary. *Source: Department of Commerce*

COCONUT OIL AND COPRA

Supply & Distribution of Coconut Oil in the United States In Millions of Pounds

Year Begin. Oct. 1	Coconut Oil							Production of Coconut Oil (Refined)				
						Domestic Disappearance						
	Production From Copra	Imports[2]	Stocks Dec. 31[3]	Total Supply	Exports & Shipments	Total	Per Capita	Total	Jan.–March	April–June	July–Sept.	Oct.–Dec.
1975-6	—	1,248	107	1,355	53	1,175	5.46	716.2	146.2	169.6	186.8	213.6
1976-7	—	1,115	127	1,243	31	1,075	4.96	849.2	214.2	223.7	216.1	195.2
1977-8	—	980	137	1,117	33	939	4.30	729.4	184.5	196.7	175.6	172.6
1978-9[1]	—	967	145	1,112	10	945		768.3	187.9	207.5	196.6	176.2
1979-0[1]	—	850	157	1,007	10	850		595.6	183.9	137.4	143.8	129.7
1980-1[1]								644.7	146.1	153.4	156.0	196.1
1981-2[1]								700.3	193.3	175.3	171.9	159.8

[1] Preliminary. [2] Imports for consumption. [3] Includes G.S.A. stockpile & in U.S. bond.
Sources: Bureau of the Census; Agricultural Marketing Service

Utilization of Coconut Oil in the United States In Millions of Pounds

Year	Food Uses					Nonfood Uses					
	Shortening	Margarine	Salad Oil[3]	Other	Total	Soap	Fatty Acids	Foots & Loss	Drying Oil Pdt's.	Other	Total
1975[1]	106	20	36	249	442	163	90	34	4	—	430
1976[2]	128	4	74	363	492	194	107	45	5	192	499
1977[2]	78	5	42	323	383	198	116	43	5	116	495
1978[2]	75	7	29			184	128	44			
1979[2]	93	4				190					
1980[3]	103										

[1] Preliminary. [2] Estimate. [3] or Cooking Oil. *Source: Economic Research Service, U.S.D.A.*

U.S. Consumption of Coconut Oil in End Products In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1975	67.6	58.2	68.1	70.7	67.7	71.8	61.8	75.2	81.1	87.8	78.5	76.8	865.3
1976	80.3	78.4	88.1	83.3	84.9	90.3	80.2	82.6	80.8	79.2	87.1	75.1	990.3
1977	73.4	69.9	82.6	73.0	73.9	79.1	63.1	71.9	73.1	76.3	77.4	65.0	878.7
1978	69.3	71.0	81.5	88.9	87.6	76.1	73.6	79.0	72.4	84.0	75.4	55.4	914.2
1979[1]	72.7	66.3	83.3	69.1	69.8	62.0	50.4	58.5	58.0	54.4	55.3	48.5	748.4
1980[1]	55.9	49.9	59.5	55.8	58.1	56.3	56.2	51.0	62.5	66.9	63.1	58.3	693.5
1981[1]	67.7	65.0	71.1	68.3	64.0	70.4	58.0	70.4	66.7	73.2	59.8	52.2	786.8
1982[1]	63.3	59.0											

[1] Preliminary. *Source: Bureau of the Census*

Stocks of Coconut Oil (Crude & Refined) in the United States In Millions of Pounds

Year	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1976	114.1	140.6	135.4	113.6	114.1	125.3	125.6	127.3	150.3	127.4	142.	137.9
1977	123.0	163.9	152.0	156.3	170.7	162.7	150.5	160.5	178.8	136.7	128.6	114.6
1978	133.7	146.5	176.7	173.6	166.8	140.2	146.0	132.6	130.6	144.8	115.6	112.6
1979[1]	147.2	198.4	195.7	177.2	138.6	148.3	112.5	129.9	131.6	157.0	211.5	198.4
1980[1]	217.4	222.8	177.0	164.1	163.0	154.6	132.5	152.1	176.1	152.9	190.0	210.8
1981[1]	234.6	251.6	299.0	266.4	253.7	239.1	235.2	220.9	226.7	204.3	170.1	168.7
1982[1]	173.1	153.6	186.0	158.7								

[1] Preliminary. *Source: Bureau of Census*

Average Price of Coconut Oil (Crude)[1] at the Pacific Coast (United States) In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1976	16.1	16.1	17.0	17.1	17.2	18.9	22.3	21.6	23.8	23.0	23.8	26.3	20.3
1977	25.6	27.4	34.7	37.3	34.3	29.9	24.8	21.8	22.9	23.9	24.9	26.4	27.8
1978	26.4	27.1	31.9	30.5	29.9	32.4	32.9	32.3	39.2	41.6	42.6	42.6	34.1
1979	46.3	47.2	47.0	49.9	53.2	57.3	57.3	53.7	44.8	42.5	42.4	40.2	48.5
1980	40.8	40.6	37.5	34.1	29.3	29.5	30.4	29.9	29.1	27.9	29.4	27.8	32.1
1981	26.3	25.0	23.9	24.3	26.0	27.4	28.1	26.4	24.3	26.6	26.6	25.4	25.9
1982	24.8	24.8	22.9										

[1] Tank cars, f.o.b. mill. Includes 1¢ import duty. *Source: Bureau of Labor Statistics*

Coffee

The world coffee crop for the 1981/82 season (October/September) was estimated by the USDA in March 1982 at a record-large 96.66 million bags (60 kilograms each), up 13 percent from the revised 1980/81 estimate of 85.31 million bags. World 1981/82 exportable coffee production (total harvested production less domestic consumption in producing countries) was estimated by the USDA at 75.9 million bags, 16.6 percent higher than the 1980/81 estimate of 65.1 million bags.

World coffee exports, including the green bean equivalent of roasted/ground and soluble, were expected by the USDA to total about 64.7 million bags during the 1981/82 crop year, 9.5 percent above the 59.1 million bags exported during 1980/81. Exporting members of the International Coffee Organization account for 99 percent of total world exports.

World carryover stocks of coffee at the end of the 1981/82 season (September 30, 1982) were projected by the USDA to increase to 43.33 million bags from 31.79 million bags a year earlier. Since 1979/80, world coffee stocks have increased dramatically because of the rapid growth in production caused by large-scale plantings in the late 1970s and the imposition of coffee export quotas by the International Coffee Organization, according to the USDA.

The Brazilian Coffee Institute (IBC) in early April 1982, revised upwards to 18.5–18.9 million bags its estimate of the July 20–21, 1981 freeze-damaged 1982/83 coffee crop from its July 1981 projection of 14.9 million bags. The impact of the July 20–21, 1981 freeze on the 1981/82 crop was minor because harvests were then complete in Parana and Sao Paulo. Prior to the freeze, the 1982/83 Brazilian crop had been projected at 27 to 30.5 million bags.

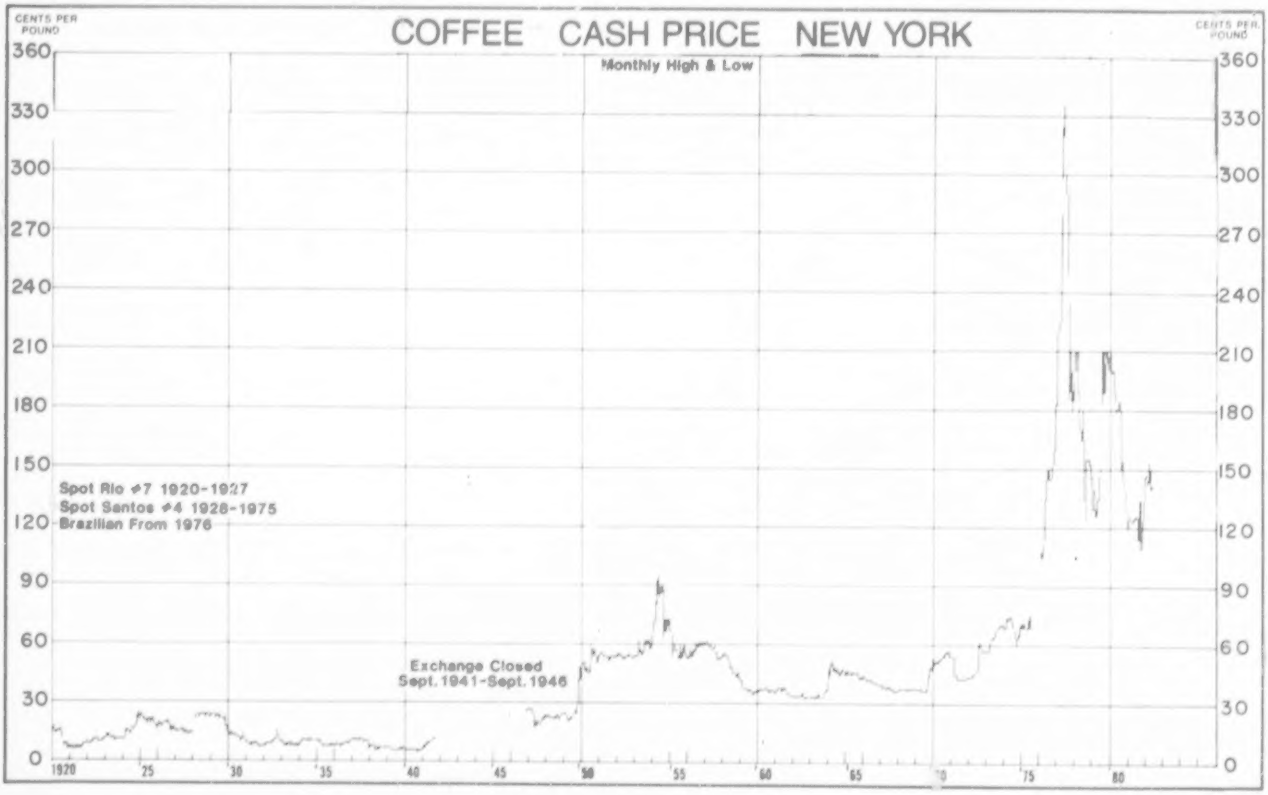
U.S. imports of green coffee in calendar 1981 totaled 16.5 million bags (60 kilograms or 132.276 pounds each), down 9 percent from 1980 imports of 18.2 million bags. The largest drop occurred for Colombian Milds. Imports of Unwashed Arabicas, mainly from Brazil, and of Robustas increased. U.S. imports of Roasted coffee were about 32 percent lower than in 1980, but soluble coffee imports were up about 4 percent from the 1980 level. U.S. per capita consumption of coffee in 1981 was estimated at 9.5 pounds, compared with 10.4 pounds in 1980.

International Coffee Organization

At its September 1981 meeting, the International Coffee Council approved a one-year extension of the 1976 International Coffee Agreement to September 1983. The Council also established a global export quota for the 1981/82 year ending September 30, 1982 of 56 million bags (60 kilograms each), including 53.2 million for members entitled to a basic quota and 2.8 million for members exempt from basic quotas. Quotas to exporting members are adjusted based on a 15-day moving average of the composite indicator prices, compared with a 20-day moving average indicator price for 1980/81. The global quota can be reduced in stages to 52 million bags when the 15-day average indicator price is at, or below $1.20 per pound. The quota can also be increased, up to 60.6 million bags, if the indicator price is at, or above $1.40 per pound.

Futures Markets

Arabica coffee futures are traded on the Coffee, Sugar & Cocoa Exchange Inc. in New York. Robusta coffee futures are traded in London.



COFFEE

World Green Coffee (Total) Production   In Thousands of 60 Kilo Bags (132.276 Lbs. Per Bag)

Crop Year	Angola	Brazil	Cameroon	Colombia	Costa Rica	Ethiopia	Guatemala	India	Indonesia	Ivory Coast	Mexico	Salvador	Uganda	Zaire (Congo, K)	World Total
1973–4	3,200	14,500	1,260	7,800	1,570	1,700	2,200	1,535	2,750	3,285	3,300	2,378	3,100	1,317	62,459
1974–5	3,444	27,500	1,816	9,000	1,390	2,488	2,540	1,630	2,675	4,500	3,900	3,300	3,331	1,150	81,691
1975–6	1,180	23,000	1,482	8,500	1,276	2,677	2,043	1,498	3,049	5,266	3,856	2,530	2,214	1,072	73,008
1976–7	1,131	9,300	1,307	9,300	1,331	2,782	2,213	1,753	3,219	4,867	3,330	2,973	2,664	1,437	61,439
1977–8	1,047	17,500	1,371	11,050	1,449	3,143	2,550	2,147	3,911	3,393	3,401	2,700	1,868	1,129	71,374
1978–9	648	20,000	1,627	12,600	1,749	3,142	2,827	1,842	4,788	4,616	4,042	3,423	1,823	1,300	79,235
1979–0	300	22,000	1,658	12,712	1,507	3,088	2,647	2,600	4,803	4,120	3,600	3,122	2,082	1,231	81,840
1980–1[1]	430	21,500	1,750	14,000	2,038	3,100	2,450	2,175	5,162	5,333	3,650	2,376	2,000	1,400	83,677
1981–2[1]	400	32,500	1,790	14,500	1,875	3,200	2,600	2,250	5,420	4,666	3,850	2,214	1,900	1,300	95,584

[1] Preliminary. *Source: Foreign Agricultural Service, U.S.D.A.*

World Green Coffee (Exportable)[3] Production   In Thousands of 60 Kilo Bags

Crop[2] Year	Angola	Brazil	Cameroon	Colombia	Costa Rica	Ethiopia	Guatemala	Indonesia	Ivory Coast	Kenya	Mexico	Salvador	Uganda	Zaire (Congo, K)	World Total
1971–2	3,300	14,850	1,220	5,750	1,190	1,490	1,845	1,320	4,400	973	1,835	2,440	2,830	1,200	53,083
1972–3	3,400	15,000	1,533	7,430	1,160	1,410	1,990	1,650	4,985	1,240	2,100	1,935	3,280	1,265	57,285
1973–4	3,095	6,270	1,213	6,250	1,400	1,005	1,925	1,795	3,219	1,073	1,690	2,203	3,078	1,184	43,674
1974–5	3,352	19,500	1,766	7,400	1,237	1,051	2,255	1,700	4,432	1,082	2,156	3,130	3,302	1,017	62,862
1975–6	1,100	15,000	1,455	7,100	1,104	1,011	1,753	2,033	5,107	1,224	2,476	2,350	2,192	922	54,307
1976–7	267	1,800	1,281	7,900	1,147	1,049	1,915	2,219	4,782	1,644	2,080	2,788	2,634	1,270	42,777
1977–8	972	10,000	1,344	9,500	1,264	1,354	2,245	2,886	3,357	1,367	2,001	2,510	1,838	954	52,571
1978–9	568	12,000	1,599	10,970	1,533	1,342	2,517	3,738	4,551	1,181	2,935	3,228	1,793	1,120	60,011
1979–0	220	14,000	1,626	10,962	1,296	1,250	2,332	3,723	4,055	1,562	2,310	2,922	2,052	1,041	62,005
1980–1[1]	345	13,500	1,716	12,175	1,794	1,250	2,125	4,062	5,268	1,428	2,200	2,172	1,970	1,205	63,301
1981–2[1]	315	24,500	1,755	12,650	1,640	1,325	2,265	4,265	4,601	1,522	2,370	2,009	1,869	1,100	74,968

[1] Preliminary. [2] Coffee marketing year begins in July in some countries & in others about Oct. [3] Exportable production represents total harvested production minus estimated domestic consumption. *Source: Foreign Agricultural Service, U.S.D.A.*

U.S. Coffee[1] Roastings & Inventories   In Thousands of 60 Kilo Bags

Year	Roastings (Green Weight)—By Quarters 1st	2nd	3rd	4th	Total	Inventories Mar. 31	June 30	Sept. 30	Dec. 31
1973	5,203	4,784	4,275	5,153	19,415	3,920	4,325	4,582	4,146
1974	5,103	4,629	3,840	4,997	18,569	4,940	5,108	4,072	2,770
1975	4,713	4,469	4,743	4,626	18,551	2,468	2,523	3,467	3,300
1976	5,612	4,977	3,853	4,621	19,063	3,194	2,908	2,961	2,805
1977[2]	4,752	3,239	2,364	3,878	14,233	3,519	3,115	2,638	1,684
1978[2]	4,467	3,554	3,781	4,497	16,299	2,161	2,202	2,131	2,347
1979[2]	4,681	4,303	3,755	4,266	17,005	2,345	2,405	2,724	2,521
1980[2]	4,297	4,023	3,859	4,868	17,047	2,918	2,907	2,956	2,834
1981[2]	4,742	3,962				2,849	2,590		

[1] Green coffee, excluding stocks & roastings by Military Services. [2] Preliminary. *Source: Bureau of the Census*

Average Spot Price of Coffee (Santos No. 4) in N.Y.   In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1970	54.8	54.8	54.3	53.8	53.8	53.8	56.8	57.0	57.8	58.8	57.5	55.0	55.7
1971	55.0	55.0	48.0	45.0	43.8	43.8	43.0	43.3	43.3	43.3	44.0	44.0	46.1
1972	N.A.	N.A.	N.A.	46.3	48.0	48.5	N.A.	62.5	59.0	58.0	56.0	57.0	54.4
1973	57.0	62.0	65 5	65.0	65.0	67.0	70.0	70.0	72.5	72.3	73.0	72.0	67.6
1974	72.0	71.0	75.0	75.5	76.5	74.0	72.0	63.0	60.0	64.0	69.0	70.0	70.2
1975	67.5	68.0						No Quotations					67.8
1976		No Quote			93.5		No Quote		152.0		No Quote		122.8
1977							No Quote						
1978				No Quote				135.0	154.0	154.0	153.0	146.0	148.4
1979	146.0	127.0	136.0	138.0	148.0	180.0	209.0	201.0	206.0	208.0	205.0	212.0	176.3
1980	189.0	213.0	205.0	203.0	218.0	211.0	195.0	206.0	206.0	210.0	210.0	208.0	206.6
1981	218.0	218.0	218.0	218.0	129.0	115.5	115.5	127.0	127.0	129.5	147.0	150.0	159.4
1982	151.0	136.0	136.0										

Source: Bureau of Labor Statistics (0191-0101.01)

Total Coffee Imports (for Consumption) into the U.S. In Thousands of 60 Kilo Bags

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1970	1,783	1,841	1,716	1,639	1,644	1,891	1,550	1,616	1,355	1,713	1,597	1,382	19,727
1971	2,002	1,530	1,480	2,032	1,759	1,941	2,132	2,720	2,754	621	875	1,818	21,669
1972	2,547	2,172	1,137	1,146	1,784	1,452	1,434	1,947	2,149	2,057	1,643	1,288	20,757
1973	1,996	1,844	2,101	2,050	2,494	1,710	1,573	1,731	1,399	1,624	1,624	1,652	21,799
1974	2,182	2,022	2,457	2,264	1,873	1,529	1,499	1,152	821	740	1,159	1,550	19,248
1975	1,852	1,656	1,535	1,448	1,365	1,736	1,626	1,868	2,533	1,784	1,587	1,299	20,289
1976	1,664	1,744	2,311	1,636	1,546	1,864	1,909	1,637	956	1,013	1,649	1,858	19,788
1977	1,994	1,707	1,839	1,824	1,224	1,137	756	695	678	635	972	1,347	14,808
1978	1,682	1,575	1,707	1,557	1,345	1,249	1,316	1,124	1,337	1,901	1,689	1,651	18,133
1979	1,747	1,353	1,631	2,037	1,619	1,617	1,597	1,404	1,632	1,273	1,593	1,893	19,396
1980	2,020	1,366	1,421	1,642	1,566	1,663	1,533	1,386	1,062	1,292	1,386	1,715	18,153
1981	1,858	1,738	1,395	1,299	1,356	1,026	922	1,213	1,150	1,487	1,565	1,547	16,555
1982	1,287												

Source: U.S. Dept. of Commerce

Total Coffee Imports (for Consumption) into the U.S. In Thousands of 60 Kilo Bags

Year	Ethiopia	Brazil	Colombia	Costa-Rica	Domin. Repub.	Ecuador	Guatemala	Indonesia	Mexico	Ivory Coast	Angola	Salvador	Venezuela	Grand Total
1970	1,071	4,717	2,497	375	352	600	716		982		1,385	539	253	19,732
1971	1,130	6,536	2,642	350	338	404	813		1,286		1,590	645	246	22,686
1972	965	6,152	2,711	294	401	490	689	744	1,070	977	1,297	391	243	20,769
1973	1,062	4,596	2,868	284	507	435	1,110	626	1,641	1,150	1,693	1,047	174	21,789
1974	505	2,725	3,090	268	381	512	1,096	942	1,324	749	2,396	1,111	246	19,245
1975	533	3,748	3,400	192	336	694	874	765	1,662	966	1,202	1,018	182	20,289
1976	703	3,092	2,688	179	551	767	749	1,082	1,869	1,330	871	1,045	288	19,788
1977	288	2,453	1,951	272	585	505	832	860	1,406	673	49	1,037	155	14,808
1978	461	2,694	2,808	334	461	1,044	942	1,177	1,390	775	304	627	239	18,133
1979	549	1,890	3,891	516	548	638	1,123	1,294	1,934	834	40	1,123	121	19,396
1980	406	3,505	3,404	298	343	539	1,374	1,315	1,337	438	120	1,374	35	18,153
1981[1]	547	3,243	1,727	226	359	701	645	1,516	1,393	602	21	779	27	16,555
1982														

[1] Preliminary. *Source: U.S. Department of Commerce*

Volume of Trading of Coffee "C" Futures at New York In Contracts

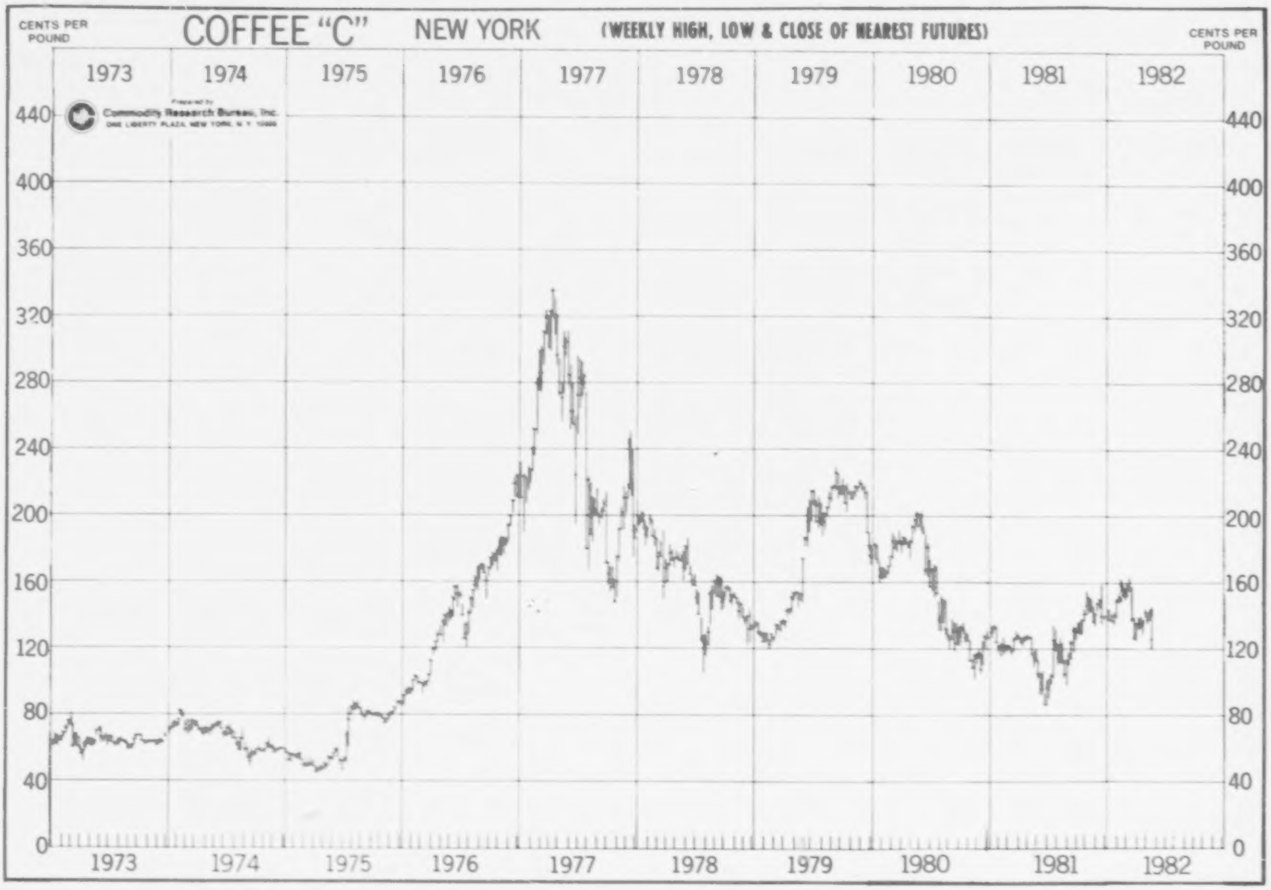
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	11,125	10,341	17,202	12,049	12,194	11,112	11,346	18,526	13,526	14,615	14,589	17,334	163,959
1979	21,463	25,243	24,205	36,298	35,885	39,137	43,944	43,046	40,088	50,054	51,949	38,488	449,799
1980	70,277	77,143	112,558	93,108	145,830	87,149	80,217	66,054	69,731	37,528	35,310	32,029	906,944
1981	38,671	34,086	44,963	29,766	39,384	46,094	50,759	50,482	44,368	44,235	49,468	41,757	515,302
1982	47,560	50,976	63,168	52,708									
1983													

Source: N.Y. Coffee, Sugar & Cocoa Exch., Inc.

Month End Open Interest of Coffee Futures at New York In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	4,413	4,191	3,942	3,661	3,733	2,952	3,152	3,926	4,004	4,767	5,951	6,581
1979	7,113	7,965	8,799	9,751	10,279	8,761	10,214	12,014	12,479	14,808	15,974	15,988
1980	13,077	13,113	12,990	11,288	16,975	15,854	13,576	10,767	11,824	11,155	9,489	8,848
1981	8,218	8,624	9,931	10,043	8,969	8,093	9,182	8,182	9,223	9,084	8,922	9,823
1982	11,236	9,647	9,249	8,753								
1983												

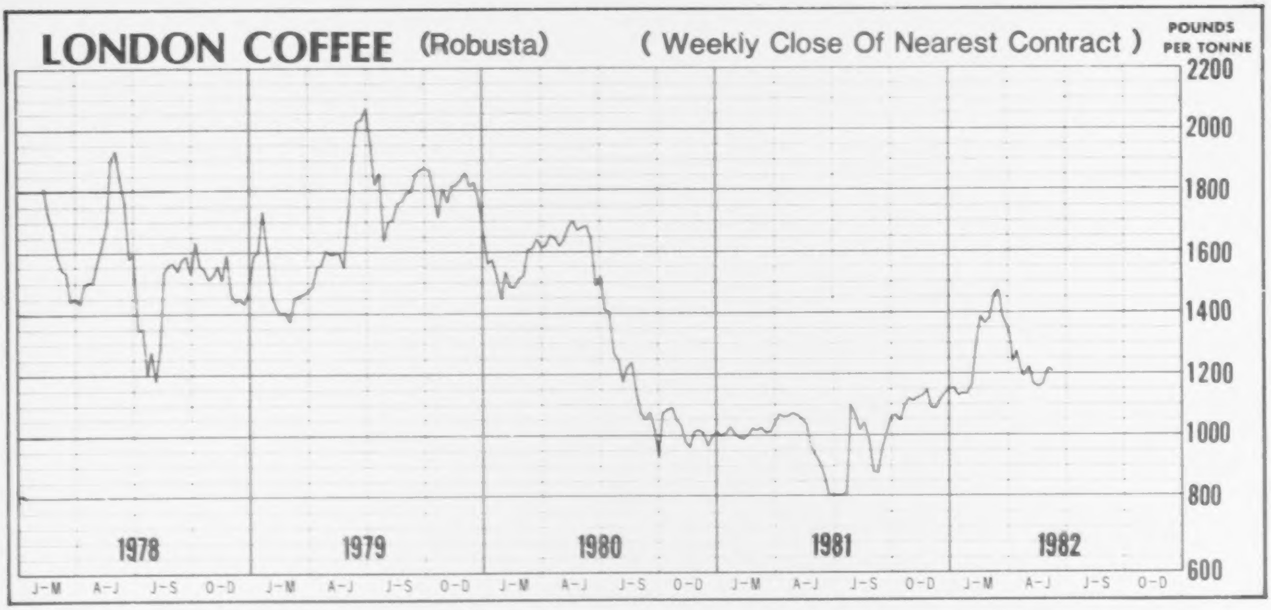
Source: N.Y. Coffee, Sugar & Cocoa Exch., Inc.



High, Low & Closing Prices of May Coffee Futures in New York In Cents per Pound

Year of Delivery		Year Prior to Delivery									Delivery Year					Life of Delivery Range
		Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	
1978	High	—	314.50	294.13	255.25	201.50	185.00	171.25	150.00	161.00	175.80	190.40	179.00	173.50	183.25	179.25	314.50
	Low	—	290.75	255.90	188.00	163.00	159.00	145.50	132.00	135.00	152.00	167.00	158.80	144.50	160.25	172.00	132.00
	Close	—	292.75	261.25	194.07	179.00	164.25	147.50	147.50	158.63	174.43	170.50	159.46	168.65	174.75	179.00	—
1979	High	125.00	120.00	150.25	163.50	121.25	138.50	144.00	144.00	139.95	130.50	134.7[illegible]	128.45	138.00	152.00	155.10	163.50
	Low	111.75	111.00	114.50	121.50	94.00	102.00	128.00	132.25	126.50	114.75	120.50	119.41	126.60	132.50	145.00	94.00
	Close	118.25	115.20	149.50	124.75	113.50	137.00	132.88	139.25	130.36	130.47	124.92	127.47	137.49	151.25	149.49	—
1980	High	145.00	154.86	155.00	216.49	216.35	197.00	200.00	204.75	198.00	191.50	184.00	183.50	194.75	188.00	199.00	216.49
	Low	126.49	140.50	144.05	157.00	178.29	179.25	190.35	183.50	187.00	175.00	166.91	165.50	180.75	176.50	174.75	116.00
	Close	144.99	153.50	153.00	216.49	183.90	195.09	197.25	189.31	194.08	175.96	171.00	183.26	182.25	176.60	195.25	—
1981	High	190.75	187.50	198.00	198.60	181.40	162.00	157.00	138.00	128.50	130.40	137.00	127.00	131.40	129.25	127.90	198.60
	Low	176.25	176.10	177.40	169.00	138.47	135.25	129.75	128.25	114.75	116.00	123.30	115.55	117.65	121.50	113.00	113.00
	Close	179.69	178.54	190.60	179.75	146.59	143.78	134.65	128.55	123.25	127.81	127.25	121.00	128.66	126.48	113.00	—
1982	High	126.25	124.00	123.87	111.00	126.75	120.25	123.50	130.25	138.00	133.80	137.88	147.30	149.00	143.75		
	Low	120.10	117.50	111.50	80.50	81.25	98.28	96.10	123.00	124.25	122.23	128.75	137.25	124.50	129.20		
	Close	122.60	122.25	112.50	87.50	121.45	98.28	123.00	129.00	126.23	133.63	137.88	141.26	128.56	141.72		
1983	High	116.50	118.50														
	Low	114.00	107.50														
	Close	114.76	113.00														

Source: N.Y. Coffee, Sugar & Cocoa Exch., Inc.



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Coke

World Production of Metallurgical Coke[1], by Specified Countries In Millions of Short Tons

Year	Belgium	Canada	Czechoslovakia	France	W. Germany	United Kingdom	India	Italy	Japan	Netherlands	Poland	China	U.S.S.R.[3]	United States	World Total
1969	8.0	5.0	11.0	15.0	43.0	22.5	9.9	7.3	34.2	2.2	16.3	19.0	81.0	64.8	370.2
1970	7.8	5.7	11.3	15.6	44.0	22.4	9.9	7.8	41.6	2.2	15.3	20.0	83.1	66.5	386.3
1971	7.5	5.1	11.5	13.8	41.4	21.1	9.9	7.7	42.7	2.1	15.6	24.0	86.3	57.4	377.7
1972	8.0	5.2	11.8	12.7	38.0	14.8	10.0	7.8	39.8	2.2	17.5	26.5	87.9	60.5	375.4
1973	8.6	5.9	10.1	13.1	37.5	19.6	9.8	8.5	48.9	2.9	18.7	30.9	89.7	64.3	422.8
1974	8.9	6.0	10.3	12.9	38.5	17.4	9.0	9.4	50.3	3.0	18.7	30.9	91.1	61.6	424.9
1975	6.3	5.8	10.2	12.1	38.4	17.5	7.8	8.9	49.4	3.0	19.0	30.9	92.1	57.2	417.4
1976[2]	8.6	5.8	11.9	12.0	35.2	17.4	9.9	8.8	47.9	3.1	19.8	30.9	93.0	58.3	424.9
1977[3]	6.1	5.4	9.9	11.9	30.3	15.6	11.0	8.9	47.0	2.8	21.0	30.9	94.2	53.5	411.8
1978[3]														49.0	402.0
1979[3]														52.9	375.9
1980[3]														46.1	

[1] Excluding Breeze. [2] Preliminary. [3] Estimate. *Source: Bureau of Mines*

U.S. Salient Statistics of Coke In Thousands of Net Tons

Year	Production			Producers' Stocks—Jan. 1						Exports to		Value of		Value Per Ton Sold	
					Oven Coke at Plants							Coke Produced[2]	All Coal Chemical Mater.	Oven Coke	Beehive Coke
	Total	Oven	Beehive	Total	Merchant	Furnace	Beehive	Exports	Imports	Canada	Mexico	Mil. $		$	
1969	64,757	64,047	710	5,985	348	5,637	1	1,629	173	292.2	629.8	1,403	289	24.50	16.23
1970	66,525	65,654	871	3,120	99	3,020	1	2,478	153	347.1	376.0	1,899	293	29.97	19.89
1971	57,436	56,664	772	4,113	95	4,018	1	1,509	174	492.4	80.2	1,849	260	37.41	21.45
1972	60,507	59,853	654	3,510	134	3,376	1	1,232	185	488.0	105.2	2,080	295	40.70	22.04
1973	64,325	63,496	829	2,941	351	2,590	1	1,395	1,094	747.5	102.3	2,575	356	42.92	27.31
1974	61,581	60,737	845	1,184	71	1,113	—	1,278	3,540	709.7	158.0	4,609	653	65.74	44.02
1975	57,207	56,494	713	935	25	910	—	1,273	1,819	680.6	107.3	4,607	654	87.64	65.17
1976	58,333	57,728	605	5,001	278	4,718	—	1,315	1,311	754.4	87.7	5,021	920	94.35	72.48
1977[1]	53,509	53,060	449	6,491	314	6,173	—	1,241	1,829	634.9	49.4	4,653	883	103.27	78.87
1978[1]	49,009	48,593	355	6,444	136	6,308	—	693	5,722	299	37.4	5,635	923		
1979[1]	52,943			3,534	184	3,350	—	1,440	3,974	598	61.0	5,459	1,203		
1980[1]	46,132			5,185	595	4,590	—	2,071	659	812	75.0				
1981[1]				8,627	1,106	7,521	—		527						
1982															

[1] Preliminary. [2] Beehive and oven, coke & breeze. *Source: Bureau of Mines*

Oven Coke Production in the United States In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1969	5,177	4,873	5,297	5,312	5,514	5,347	5,386	5,412	5,274	5,552	5,333	5,570	64,047
1970	5,332	5,069	5,655	5,468	5,603	5,402	5,442	5,368	5,425	5,680	5,537	5,672	65,654
1971	5,647	5,054	5,752	5,621	5,693	5,268	4,816	3,455	3,976	3,961	3,220	4,200	56,664
1972	4,763	4,651	5,076	5,091	5,237	4,976	5,024	5,088	4,822	5,026	4,914	5,183	59,853
1973	5,364	4,891	5,356	5,262	5,454	5,325	5,307	5,383	5,153	5,358	5,218	5,426	63,496
1974	5,422	4,974	5,265	5,255	5,369	5,218	5,251	5,219	5,056	5,214	4,427	4,067	60,737
1975	4,924	4,750	5,324	5,030	5,052	4,765	4,532	4,427	4,250	4,527	4,365	4,549	56,494
1976	4,551	4,372	5,041	4,884	5,069	4,938	5,007	4,785	4,720	4,857	4,752	4,751	57,728
1977	4,412	4,267	4,696	4,666	4,822	4,686	4,639	4,249	4,069	4,289	4,186	4,077	53,060
1978	3,603	2,741	2,661	3,753	4,398	4,362	4,455	4,379	4,346	4,512	4,383	4,645	48,238
1979[1]	4,448	4,015	4,653	4,389	4,591	4,324	4,386	4,430	4,367	4,460	4,266	4,453	52,943
1980[1]	4,394	4,204	4,444	4,396	4,238	3,686	3,370	3,387	3,295	3,470	3,565	3,683	46,132
1981[1]	—11,382—			—10,058—			—11,143—						
1982													

[1] Preliminary. *Source: Bureau of Mines*

U.S. Coke & Its Relationship to the Iron Industry and Coal-Chemical Production

Year	Consumption			Lbs. of Coke Consumed Per Net Ton of Pig Iron & Ferro-Alloys	% Yield of Coke From Coal	Lbs. of Coking Coal Consumed Per Net Ton of P. I. & F. A.	Distribution of Coke to Coal-Chemical Materials Produced								
	Apparent Consumption	In Iron Furnaces	All Other				Blast Furnace Plants	Foundries	Producer & Water Gas Plants	Other Industrial Plants	Light-Oil Deriv. Mil. Gal.	Ammonium Sulfate[2] Mill. Lbs.	Crude Coal Tar	Crude Light Oil	Coke-oven Gas Billion cu. ft.
	1,000 Net Tons						In Millions of Net Tons						Mill. Gal.		
1969	66,166	60,176	5,990	1,260	69.4	1,816	61.3	3.5	—3.0—		136	1,464	769	259	962
1970	63,207	58,151	5,056	1,267	69.0	1,833	61.2	3.3	—2.3—		120	1,382	761	244	993
1971	56,689	51,498	5,191	1,261	69.0	1,827	54.0	3.3	—1.6—		95	1,154	679	202	862
1972	60,046	54,607	5,439	1,222	69.0	1,768	56.0	3.4	—1.6—		104	1,208	747	214	916
1973	65,765	60,720	5,045	1,200	68.4	1,754	61.2	3.7	—1.4—		114	1,250	732	226	995
1974	64,092	58,441	5,651	1,219	68.4	1,783	57.2	3.4	—1.2—		95	1,200	677	217	967
1975	53,687	48,817	4,870	1,222	68.4	1,786	49.6	2.6	— .9—			1,022	646	195	895
1976	56,834	51,561	5,273	1,187	68.9	1,723	52.5	3.0	—1.2—			1,044	636	198	
1977[1]	54,144	48,510	5,634	1,193	68.9	1,731	48.8	3.3	—1.5—				592	178	
1978[1]	56,984	51,286	5,662	1,439	68.6	1,667	48.1	2.6	—1.1—				541	162	
1979[1]	53,826	50,008	3,818	1,150	68.4	1,681	48.0	2.5	—1.4—				591	175	
1980[1]													534	159	

[1] Preliminary. [2] Or equivalent. *Source: Bureau of Mines*

Average Price[1] of Oven Foundry Coke F.O.B. at Birmingham, Ala. In Dollars Per Net Ton

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1969	35.85	35.85	35.85	35.85	35.85	35.85	35.85	35.85	35.85	37.85	37.85	37.85	36.35
1970	37.85	37.85	37.85	41.85	41.85	41.85	41.85	41.85	41.85	48.60	48.60	48.60	42.54
1971	48.60	48.60	48.60	48.60	48.60	50.10	50.10	50.10	50.10	50.10	50.10	50.10	49.48
1972	50.10	52.35	52.35	52.35	52.35	52.35	52.35	52.35	52.35	52.35	52.35	52.35	52.16
1973	54.90	54.90	54.90	56.80	56.80	56.80	56.80	56.80	56.80	56.80	56.80	56.80	56.33
1974	59.95	59.95	63.75	73.50	80.50	80.50	80.50	91.00	95.50	100.50	100.50	100.50	82.22
1975	108.00	108.00	108.00	110.50	110.50	110.50	110.50	110.50	110.50	110.50	110.50	110.50	109.88
1976	117.00	117.00	117.00	117.00	117.00	117.00	117.00	117.00	117.00	117.00	117.00	117.00	117.00
1977	123.00	123.00	123.00	123.00	129.00	129.00	129.00	129.00	129.00	129.00	129.00	129.00	127.00
1978	134.00	134.00	134.00	134.00	139.75	139.75	139.75	139.75	139.75	139.75	139.75	139.75	137.83
1979	144.75	144.75	144.75	N.A.	N.A.	N.A.	N.A.	144.75	144.75	146.65	146.65	146.65	145.46
1980	146 65	146.65	146.65	146.65	146.65	146.65	146.65	146.65	146.65	146.65	146.65	146.65	146.65
1981	146.65	146.65	144.75	144.75	159.75	159.75	159.75	159.75	159.75	159.75	159.75	159.75	155.07
1982	159.75	159.75	159.75										

[1] Merchant plants. *Source: Bureau of Labor Statistics* (0521-0102.02)

Coke (Oven-Coke) Stocks at Plants In Thousands of Short Tons

Year	Jan. 1	Feb. 1	Mar. 1	April 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1969	5,985	5,865	5,565	5,019	4,507	4,162	3,896	3,787	3,816	3,699	3,430	3,320
1970	3,120	3,032	3,034	3,088	3,100	3,098	2,954	3,006	2,963	3,057	3,433	3,777
1971	4,113	4,241	4,054	3,842	3,599	3,343	3,153	3,401	3,818	4,070	4,143	3,596
1972	3,510	3,585	3,611	3,323	3,111	3,022	2,907	3,089	3,185	3,202	3,089	3,011
1973	2,941	2,824	2,560	2,291	2,035	1,796	1,712	1,514	1,520	1,501	1,435	1,313
1974	1,184	1,125	1,139	1,163	1,183	1,238	1,243	1,146	1,197	1,321	1,298	1,064
1975	935	1,054	1,262	1,442	1,733	2,261	2,889	3,522	3,867	3,821	4,108	4,522
1976	4,996	5,092	4,994	5,105	5,062	4,992	4,729	4,641	4,445	4,750	5,179	5,800
1977	6,487	6,950	7,231	7,283	7,038	6,736	6,468	6,516	6,281	6,192	6,554	6,526
1978	6,444	5,937	5,209	3,460	3,189	2,993	2,964	2,845	2,989	3,065	3,131	3,339
1979[1]	3,534	3,479	3,440	3,259	3,405	3,406	3,168	3,223	3,304	3,715	4,208	4,608
1980[1]	5,163	5,531	5,781	5,832	6,063	6,698	7,426	8,133	8,676	9,018	9,011	9,040
1981[1]	8,267			7,586			4,990			5,192		
1982												

[1] Preliminary. *Source: Bureau of Mines*

Copper

World mine production of copper in 1981 increased by about 2.4 percent, according to preliminary data of the U.S. Bureau of Mines, as an increase in U.S. production more than offset small decreases in most other countries. U.S. mine production of copper in 1981 was about 30 percent above the strike-reduced output in 1980, and the largest in 8 years despite planned shutdowns at several large mines in the final weeks of 1981. U.S. refinery production of copper was up 26.4 percent in 1981 from 1980.

Refined copper production in the U.S. from scrap at primary plants was off 4.3 percent in 1981, and production from secondary plants was off 12 percent. The total amount of copper recovered as refined metal by primary and secondary plants was 7.3 percent below the 1980 level.

Total U.S. imports for consumption (copper content) in 1981 were 21.6 percent lower than in 1980, but varied considerably by classes. Ore and concentrate imports were off 25 percent, and blister and refined copper imports were down 33 percent, but scrap imports were up 18.5 percent from 1980.

U.S. exports of refined copper in 1981 increased 68 percent from a small base. Copper exports in the form of ore, concentrate and blister rose about 45 percent, and insulated wire and cable exports were up 27 percent. Exports of unalloyed copper scrap declined 18 percent and alloyed copper scrap exports declined 26 percent.

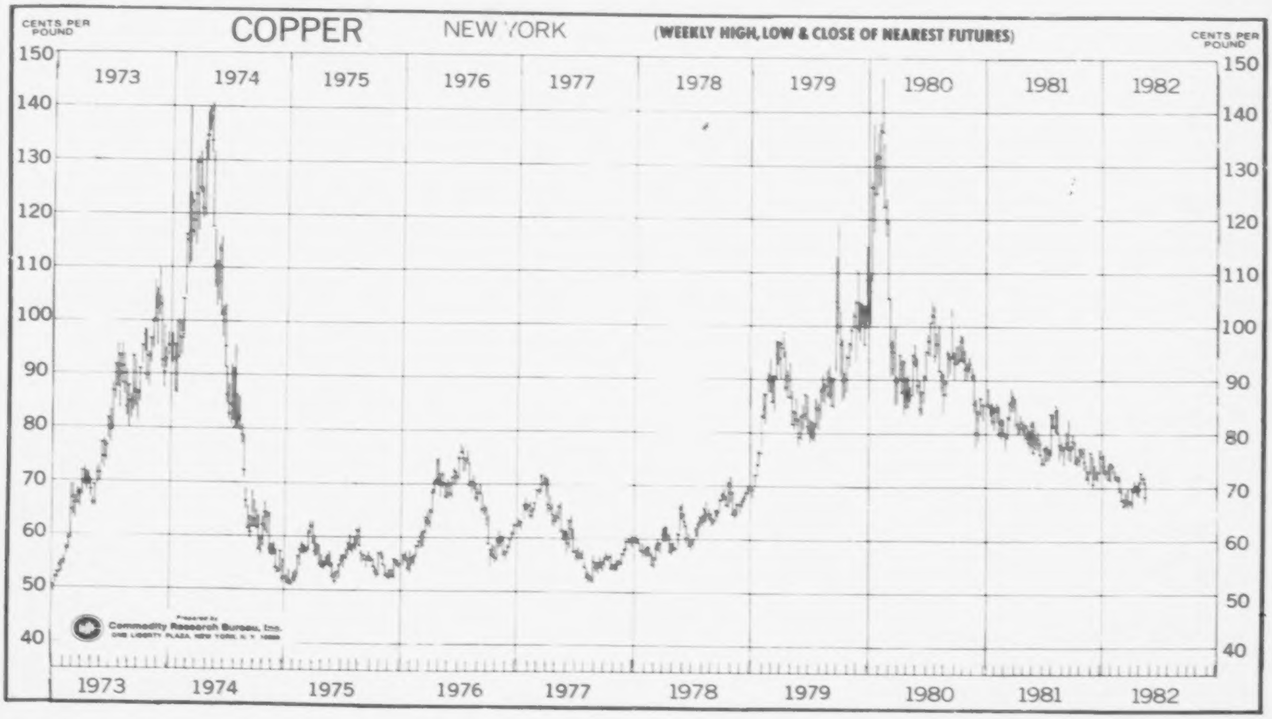
Total 1981 consumption of refined copper in the U.S. was 1.5 percent above that of 1980. However, consumption of purchased new and old copper-base scrap was 7.6 percent lower than in 1980. Refined copper consumed in mill products at wire rod mills in 1981 was less than one percent below that of the amount consumed in 1980, but consumption at brass mills was about 5 percent higher than in 1980. An estimated 80 percent of net copper consumed in 1981 entered fabrication as refined metal; of this, 70 percent was estimated to have been consumed by 18 wire mills, and 27 percent by 47 brass mills. The use of copper by industry was estimated to be: electrical—57 percent; construction—17 percent; industrial machinery—12 percent; transportation—8 percent; and other uses—6 percent.

At the end of 1981, U.S. industry stocks of refined copper were almost triple the size of inventories held a year earlier. Stocks of refined copper at wire rod mills were sharply above the year earlier level, but brass mill stocks were only slightly above the December 31, 1980 level. Blister and copper-base scrap stocks were only slightly above year-earlier levels.

The copper market was relatively depressed during 1981, suffering from the effects of high interest rates and poor demand from the construction and automotive sectors. The U.S. producer price of copper, which was quoted at 88 cents per pound at the end of December 1980, dropped below 80 cents per pound by December 31, 1981, and most domestic producers were reportedly selling their product below cost by the yearend because of low copper prices. By the end of the first quarter of 1982, domestic producers were curtailing mine production and attempting to hold the price in the 74.625 to 77 cent area for electrolytic wirebars.

Futures Markets

Copper futures are traded on the Commodity Exchange, Inc. (COMEX) in New York and on the London Metal Exchange (LME).



World Mine Production of Copper (Content of Oré) In Thousands of Metric[5] Tons

Year	Australia	Canada[3]	Chile	China	Finland	Japan	Mexico	Peru	Zambia	Poland	Zaire	Rep. of So. Africa	Philippines	United States[3]	U.S.S.R.[4] [3]	World Total[1]
1969	144.5	573.2	770.6		36.5	133.5	72.9	219.1	824.7		393.4	139.1	144.9	1,545		6,224
1970	173.9	672.7	783.4		34.2	131.7	67.3	242.8	754.1		425.1	164.5	176.7	1,720		6,638
1971	195.4	721.4	790.7		31.3	133.4	69.6	228.6	718.0		447.3	173.6	217.8	1,522		6,689
1972	205.9	793.3	800.0		32.1	123.6	86.8	248.0	791.1		472.0	178.5	235.6	1,665	733	7,329
1973	242.8	908.2	810.6		41.2	124.0	88.7	223.4	778.9	170.9	538.6	193.8	243.8	1,718	772	7,845
1974	277.1	905.4	994.4	110	39.9	90.5	91.1	233.2	769.4	218.3	550.5	197.4	249.1	1,597	816	8,063
1975	241.4	808.9	913.0	110	42.8	93.7	86.2	197.3	746.2	260.0	547.1	197.2	249.4	1,413	843	7,679
1976[5]	218.5	730.9	1,005	180	41.7	81.6	89.0	220.3	708.9	267.0	444.4	196.9	237.6	1,457	800	7,525
1977	221.6	759.4	1,056	195	46.7	81.4	89.7	341.0	656.0	289.3	481.6	208.3	272.8	1,364	830	7,756
1978	207.1	659.4	1,036	200	46.9	72.0	87.2	366.4	643.0	321.0	423.8	209.3	263.4	1,358	865	7,633
1979	234.7	636.4	1,061	200	41.1	59.1	107.1	400.4	588.3	325.0	400.0	190.6	300.5	1,444	885	7,675
1980[2]	216.8	710.1	1,068	200	36.8	53.2	175.4	365.3	595.8	346.1	459.4	215.0	324.0	1,168	900	7,617
1981[1]	180	690	1,040					360	570	300	450	210	290	1,520	930	7,800

[1] Estimate. [2] Preliminary. [3] Recoverable. [4] Smelter Production. [5] Data prior to 1976 are in THOUSANDS OF SHORT TONS. *Source: Bureau of Mines*

U.S. Salient Statistics of Copper In Thousands of Metric[9] Tons

Year	New Copper Produced													
	From Domestic Ores			From Foreign Ores[2]	Total New	Secondary Recovered[7]	Imports[3]		Exports		Stocks—Dec. 31			Appar. Consumption[6]	
	Mines	Smelters	Refineries				Unmanufactured	Refined	Metallic[4]	Refined[5]	At Producers	Refined	Blister & Materials in Solution	Primary Copper	Primary & Old Copper[8]
1969	1,545	1,547	1,469	274	1,743	575	414	131	241	200	330	39	291	1,683	2,258
1970	1,720	1,605	1,521	244	1,765	504	392	132	274	221	470	130	340	1,585	2,089
1971	1,522	1,471	1,411	181	1,592	445	359	164	263	188	378	75	303	1,623	2,068
1972	1,665	1,649	1,680	193	1,873	458	416	192	242	183	338	57	281	1,901	2,359
1973	1,718	1,705	1,698	170	1,868	486	421	203	293	189	302	37	265	1,902	2,388
1974	1,597	1,532	1,421	234	1,655	483	609	314	246	127	425	101	324	1,778	2,261
1975[9]	1,282	1,247	1,167	143	1,309	335	294	133	305	156	470	187	283	1,191	1,526
1976	1,457	1,326	1,291	106	1,396	380	485	346	218	102	463	172	291	1,656	2,036
1977	1,364	1,265	1,280	77	1,357	410	467	355	91	47	526	212	314	1,625	2,035
1978	1,358	1,270	1,327	122	1,449	502	546	415	187	92	416	153	263	1,831	2,333
1979	1,444	1,313	1,412	104	1,516	604	328	215	231	74	339	64	275	1,746	2,350
1980[1]	1,168	994	1,122	89	1,211	613	542	458	205	14		49	272	1,669	2,282
1981[1]	1,529	1,295	1,430	114	1,544			330		24		151	277	1,732	2,380
1982															

[1] Preliminary. [2] Also from matte, etc., refinery reports. [3] Data are "general" imports; that is, they include copper imported for immediate consumption plus material entering country under bond. [4] Total exports of copper, exclusive of ore, concentrates, composition metal & unrefined copper. Exclusive also of "other manufacturers of copper." [5] Ingots, bars, etc. [6] Withdrawals from total supply on domestic account. [7] From old scrap only. [8] Old scrap only. [9] Data prior to 1975 are in THOUSANDS OF SHORT TONS. *Source: Bureau of Mines*

Consumption of Refined Copper[2] in the United States In Thousands of Metric[4] Tons

Year	By-Products						By Class of Consumer						
	Cathodes	Wire Bars	Ingot & Ingot Bars	Cakes & Slabs	Billets	Other	Wire Mills	Brass Mills	Chemical Plants	Secondary Smelters	Foundries	Miscellaneous	Total Consumption
1969	241.1	1,270.8	179.8	172.5	258.4	19.6	1,296.3	797.1	3.1	7.0	38.7		2,142.2
1970	247.0	1,275.8	145.7	157.1	202.0	15.7	1,338.7	660.6	2.2	7.0	34.7		2,043.3
1971	309.4	1,236.9	118.3	154.8	182.3	17.7	1,324.9	655.8	1.5	6.9	30.4		2,019.5
1972	425.3	1,331.9	141.4	160.5	161.4	18.2	1,526.3	667.2	.9	10.0	34.5		2,238.9
1973	531.2	1,356.0	147.8	193.4	174.7	33.9	1,672.3	714.4	N.A.	10.6	N.A.		2,437.0
1974	579.7	1,136.7	143.1	178.0	138.6	18.1	1,474.3	670.2	.7	9.2	19.4	20.4	2,194.2
1975	527.9	722.8	72.5	97.7	75.7	4.1	1,061.3	439.0	.5	4.5	14.0	15.3	1,534.5
1976	846.0	768.0	93.5	123.8	84.0	8.6	1,346.0	574.9	.5	3.1	15.4	19.7	1,991.9
1977	965.5	861.3	90.2	115.0	103.3	11.2	1,511.2	628.6	N.A.	6.6	N.A.	N.A.	2,185.0
1978[4]	1,026.1	794.7	111.9	117.1	114.6	24.9	1,517.4	619.2	.4	7.5	12.4	32.3	2,189.3
1979	1,099.0	701.9	92.1	105.6	129.5	30.4	1,499.6	610.2	.4	6.3	11.9	30.1	2,158.4
1980[1]	960.2	583.0	67.6	84.3	117.4	49.7	1,308.9	511.6	.3	5.0	10.9	25.3	1,862.1
1981[3]	1,188.2	487.4	55.4	121.8	101.9	32.0	1,447.8	536.2		2.7			2,031.1

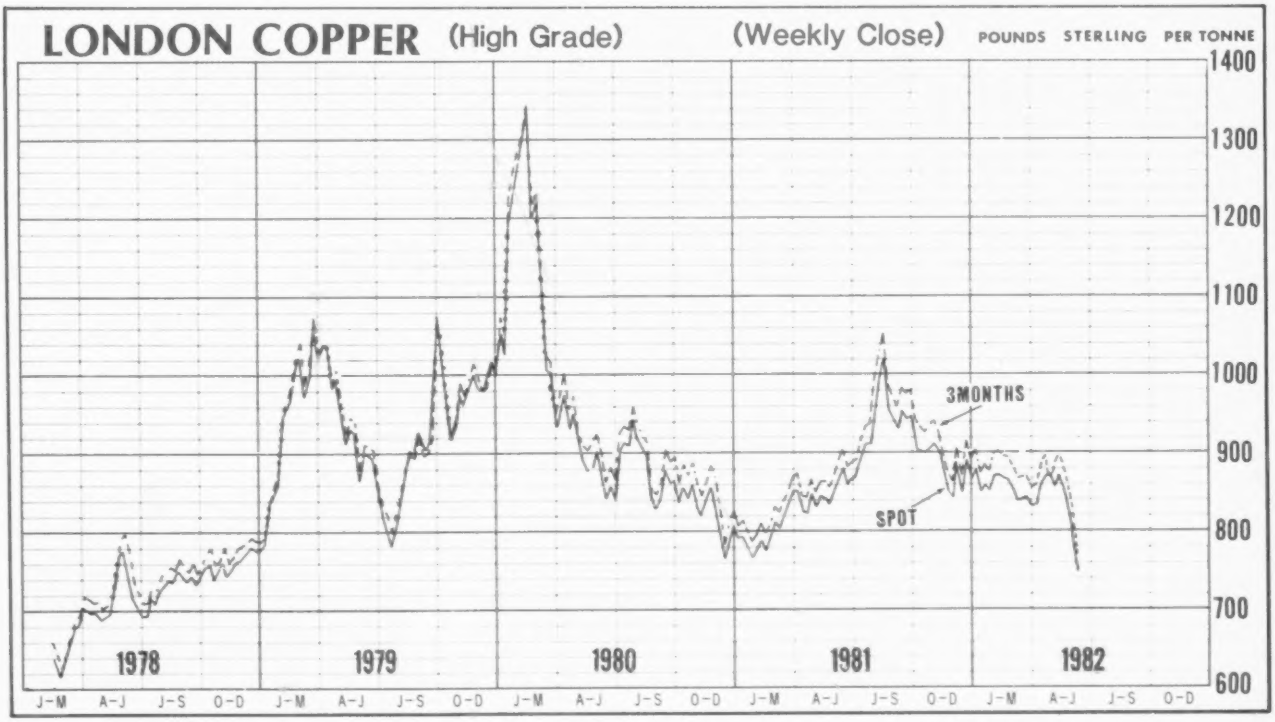
[1] Preliminary. [2] Primary and secondary. [3] Estimate. [4] Data prior to 1978 are in THOUSANDS OF SHORT TONS. *Source: Bureau of Mines*

COPPER

U.S. Mine Production of Recoverable Copper, by Selected States In Thousands of Metric[2] Tons

Year	Arizona	California	Colorado	Idaho	Michigan	Missouri	Montana	Nevada	New Mexico	Pennsylvania	Tennessee	Utah	Maine	Other States	Grand Total
1969	801.4	1.1	3.6	3.3	75.2	12.7	103.3	104.9	120.0	3.4	15.4	297.7	1.3	2.3	1,544.6
1970	917.9	2.3	3.7	3.6	67.5	12.1	120.4	106.7	166.3	2.5	15.5	295.7	2.7	2.5	1,719.7
1971	820.2	.5	3.9	3.8	56.0	8.4	88.6	96.9	157.4	3.3	13.9	263.5	2.5	3.2	1,522.2
1972	908.6	.6	3.9	2.9	67.3	11.5	123.1	101.1	168.0	2.6	11.3	259.5	1.2	3.1	1,664.8
1973	927.3	.4	3.1	3.6	72.2	10.3	132.5	93.7	204.7	1.8	8.5	256.6	1.1	2.1	1,717.9
1974	858.8	.2	3.0	2.8	67.0	12.7	131.1	84.1	196.6	—	6.3	230.6	1.5	2.3	1,597.0
1975[2]	737.7	.3	3.2	2.9	66.9	12.9	79.8	73.7	132.7	—	9.1	160.7	1.8	.4	1,282.2
1976	929.3	.3	2.2	3.1	39.7	10.0	82.7	52.8	156.4	—	10.1	168.2	1.6	.2	1,456.6
1977	838.0	.2	1.7	3.7	38.4	10.6	78.2	60.8	149.4	—	5.6	176.1	1.2	.3	1,304.4
1978	891.4	N.A.	1.2	3.9	N.A.	10.8	67.3	20.5	127.8	—	11.3	186.3	—	37.1	1,357.6
1979	946.0	N.A.	.4	3.6	N.A.	13.0	69.9	N.A.	164.3	—	N.A.	193.1	—	53.3	1,443.6
1980	757.3	N.A.	.5	3.1	N.A.	13.6	37.7	N.A.	149.4	—	N.A.	157.8	—	48.9	1,168.3
1981[1]	1,037.2			3.5		8.6	61.9		154.2			207.8		55.8	1,529.0
1982															

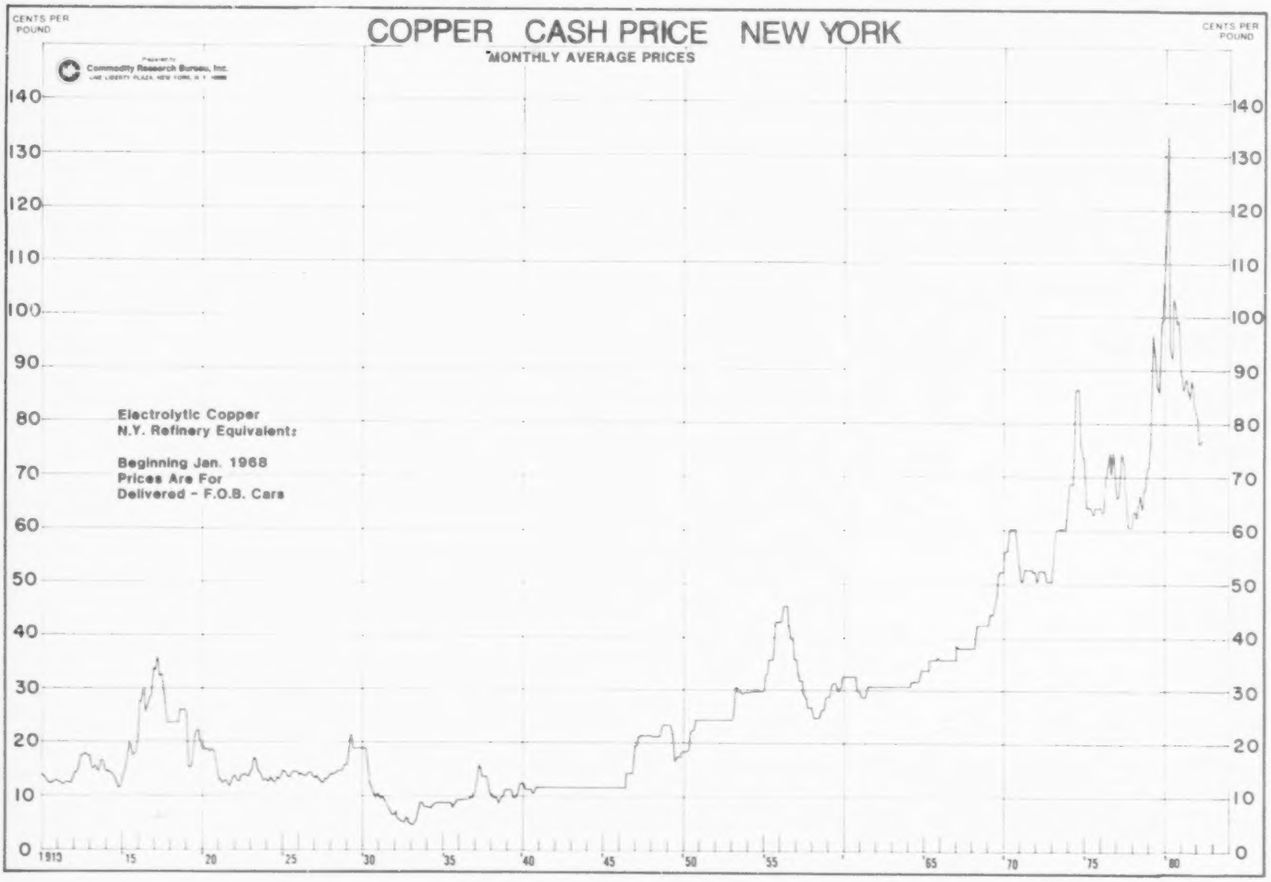
[1] Preliminary. [2] Data prior to 1975 are in THOUSANDS OF SHORT TONS. *Source: Bureau of Mines*



Producers' Prices of Electrolytic (Wirebar[1]) Copper, Delivered U.S. Destinations In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1971	51.48	50.37	50.59	52.87	52.87	52.87	52.87	52.87	52.87	52.87	52.19	50.37	52.09
1972	50.38	50.66	52.63	52.63	52.63	52.63	52.67	50.63	50.63	50.63	50.63	50.63	51.44
1973[1]	52.41	54.55	59.85	60.13	60.13	60.13	60.13	60.13	60.13	60.13	60.13	66.56	59.53
1974	68.70	68.70	68.70	68.70	81.19	86.09	86.31	86.31	83.01	78.23	75.79	73.03	77.06
1975	68.86	64.32	64.32	64.32	64.32	63.67	63.02	64.31	64.31	64.31	64.31	64.31	64.53
1976	63.63	63.63	64.73	69.26	70.63	70.63	74.63	74.63	74.63	72.34	70.63	66.10	69.62
1977	66.13	68.63	72.54	74.41	72.77	70.13	68.10	63.89	60.63	60.63	60.63	62.11	66.72
1978	63.63	63.59	62.35	64.63	64.90	66.78	63.99	67.34	67.63	70.13	71.68	71.73	66.53
1979	76.15	89.41	94.65	98.66	91.04	87.66	86.02	89.94	95.07	98.84	98.44	106.08	92.75
1980	118.05	133.83	106.23	94.61	93.16	92.39	103.10	100.60	98.73	99.41	96.98	89.20	102.19
1981	88.64	86.07	87.32	88.44	86.33	85.68	84.71	87.98	85.63	83.28	82.09	80.94	85.59
1982	79.42	79.35	76.45	76.99									
1983													

[1] Prior to Feb. 1973 prices are for delivered F.O.B. Cars. *Source: American Metal Market*



U.S. Imports (General) of Copper (Unmanufactured), by Sources and Types In Thousands of Metric[2] Tons

Year	Ore & Concentrates	Blister	Refined	Scrap	Australia	Canada	Mexico	W. Germany	Chile	Peru	Philippines	Yugoslavia	Zambia	Rep. of So. Afr.	Total U.S. Imports
1973	42.1	154.1	201.5	18.9	2.0	155.2	16.7	8.8	58.8	100.0	17.8	1.3	5.5	26.4	420.5
1974	53.4	207.8	313.6	31.2	2.7	151.3	16.8	8.7	131.9	108.9	14.3	15.1	2.8	38.4	608.6
1975	64.9	89.0	146.8	14.4	3.5	117.5	16.4	—	55.0	43.9	12.6	21.5	—	26.0	324.1
1976	70.7	44.5	381.5	19.7	7.0	148.0	9.1	—	102.0	40.1	15.0	45.6	128.3	4.9	534.7
1977	42.1	46.2	390.8	19.9	3.6	131.2	15.1	10.5	119.7	62.3	18.1	16.8	77.9	11.0	516.7
1978[2]	20.9	78.7	414.7	21.4	10.0	77.3	5.8	8.5	175.8	94.8	12.0	10.9	79.8	15.5	546.4
1979	22.4	68.1	215.2	22.2	2.1	89.0	8.5	6.1	116.2	52.8	15.4	3.4	15.9	2.0	328.3
1980[1]	13.8	47.0	458.1	22.8	5.4	152.4	8.3	.5	126.6	52.5	8.9	4.5	64.9	2.2	542.4
1981[3]	39.1	30.1	330.6	27.0	1.5	108.5	23.8		137.8	52.0	20.4	2.4	44.1		429.6

Note: Includes refined; black, blister, and converter; scrap; and copper content of ore, matte, and regulus. [1] Preliminary. [2] Data prior to 1978 are in THOUSANDS OF SHORT TONS. [3] Estimate. *Source: Department of Commerce; Bureau of Mines*

United States Exports of Refined Copper[1] to Selected Countries In Thousands of Metric[3] Tons

Year	Total U.S. Exports	United Kingdom	China Mainland	Belgium	Brazil	Canada	France	W. Germany	India	Italy	Netherlands	Taiwan	Sweden	Mexico	Japan
1972	182.7	12.1	—	3.3	16.1	18.3	25.4	28.5	.3	28.5	3.4	4.7	2.5		32.7
1973	189.4	11.7	—	4.7	21.9	12.8	23.3	17.6	—	31.5	2.9	5.8	1.2		46.3
1974	126.5	14.5	—	2.5	24.0	11.4	19.1	11.7	.1	26.5	4.4	1.1	1.4		4.0
1975	172.4	15.1	—	13.2	24.7	6.7	22.8	34.1	.1	22.2	14.9	4.0	1.0		3.0
1976	111.9	20.3	—	1.0	2.8	4.7	21.0	26.8	—	15.6	5.0	—	5.0		4.7
1977	51.5	7.3	—	3.2	.1	8.1	9.8	10.2	—	6.2	2.4	—	1.5		1.5
1978[3]	91.9	13.8	3.0	2.5	3.3	5.1	7.0	18.1	—	19.0	3.0	.9	4.2	1.0	10.0
1979	73.7	6.5	3.1	2.5	6.2	4.5	12.5	3.5	—	11.4	6.6	1.2	2.8	.5	2.0
1980	14.5	2.0	—	.6	1.5	2.9	1.9	.8	.1	1.4	.6	.3	.1	.9	.8
1981[2]	24.4	1.3	—	—	.8	6.4	1.4	1.1	—	.7	—	—	—	7.2	3.9

[1] Bars, ingots or other forms. [2] Preliminary. [3] Data prior to 1978 are in THOUSANDS OF SHORT TONS.
Source: Department of Commerce

Exports of Refined Copper from the United States In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1972	10.5	26.6	22.8	20.2	14.4	12.9	11.0	12.3	12.8	13.7	10.7	14.7	182.7
1973	15.9	15.6	12.8	17.7	13.5	18.3	19.7	18.4	16.2	15.9	13.6	11.9	189.4
1974	8.2	13.1	9.5	10.0	19.8	12.4	6.9	7.0	6.9	8.2	13.3	11.3	126.5
1975	19.7	20.8	14.3	24.9	21.3	13.5	9.8	6.7	11.5	12.5	9.0	8.4	172.4
1976	11.2	8.5	10.8	10.9	8.6	9.4	8.7	9.4	10.0	11.5	7.3	6.8	113.1
1977	3.7	1.8	3.6	5.2	5.2	5.2	5.5	1.6	4.4	4.6	5.0	6.9	52.7
1978	4.7	4.9	11.9	7.3	11.4	10.1	7.2	10.2	22.2	5.3	5.3	8.8	109.3
1979	9.8	9.4	11.6	10.0	8.9	8.7	4.8	2.9	2.9	2.7	7.3	1.5	80.5
1980	1.0	1.4	1.9	1.5	1.5	2.0	1.9	.9	.4	.5	1.0	3.4	17.4
1981	2.9	2.5	5.8	1.2	.9	3.5	1.3	1.7	3.0	.7	2.1	1.8	27.2
1982	.4												

Source: Department of Commerce

Dealers' Buying Price of No. 2 Heavy Copper Scrap at N.Y. In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1972	30.71	32.35	35.17	35.00	34.09	31.50	30.00	30.17	29.85	29.55	29.00	29.20	31.38
1973	31.84	35.68	42.93	44.21	44.50	46.50	46.50	62.07	56.82	61.77	68.26	66.50	49.80
1974	60.50	66.39	72.79	75.91	73.66	60.60	51.40	49.20	41.30	38.67	35.12	33.07	54.88
1975	31.86	30.50	33.93	33.82	31.07	29.50	32.50	36.69	38.07	37.33	36.20	35.86	33.94
1976	36.98	37.92	39.76	41.95	44.10	43.66	46.93	45.73	43.71	38.48	35.00	34.10	40.69
1977	34.00	35.73	41.50	40.63	39.62	35.91	35.00	34.04	33.00	33.00	33.00	33.00	34.23
1978	34.00	35.61	35.59	39.73	39.18	41.77	40.50	41.89	42.50	44.70	45.40	44.75	40.47
1979	47.07	58.82	65.46	68.93	63.14	59.05	57.79	58.85	62.03	62.89	62.25	65.00	60.94
1980	74.91	82.35	70.30	60.18	57.60	56.50	65.36	64.88	64.21	65.37	66.08	58.36	65.51
1981	57.60	55.50	57.14	59.50	58.20	55.32	52.68	53.50	53.00	50.16	48.08	46.00	53.89
1982	45.50	45.50	43.76	41.50									

Source: American Metal Market

High, Low & Closing Prices of May Copper Futures on the Commodity Exch., Inc., N.Y. (COMEX) ¢ Lb.

Year of Delivery		Year Prior to Delivery										Delivery Year					Life of Delivery Range
		Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	
1978	High	75.80	76.40	71.90	68.50	63.60	59.20	59.90	60.60	58.80	62.40	62.70	59.80	62.00	62.40	64.40	76.40
	Low	75.50	67.60	63.80	61.80	59.90	55.40	56.90	56.60	56.30	58.80	58.10	56.00	55.50	57.00	57.80	55.40
	Close	75.80	68.40	64.80	64.40	59.90	57.70	58.60	57.40	58.80	61.20	59.00	56.50	60.60	59.10	64.40	—
1979	High	67.90	68.20	71.80	71.00	68.95	70.60	70.00	75.10	72.55	72.75	80.10	93.50	98.15	99.00	93.10	99.00
	Low	61.90	63.00	63.80	63.50	64.00	66.90	66.55	68.80	67.60	69.40	70.85	79.50	84.70	86.70	80.80	86.70
	Close	66.60	65.20	70.60	64.30	67.65	67.60	69.75	73.45	69.70	72.50	79.95	92.70	94.60	92.60	81.65	—
1980	High	97.60	97.50	93.10	87.85	87.35	94.50	111.90	117.05	102.50	106.50	140.80	148.40	123.30	94.90	95.50	148.40
	Low	86.70	88.70	81.90	82.00	79.75	83.70	87.20	87.50	91.50	95.00	104.20	121.00	85.20	83.80	84.80	79.75
	Close	94.85	93.10	82.95	82.75	82.80	93.40	105.80	92.60	102.50	104.75	131.60	123.00	87.10	87.90	94.60	—
1981	High	135.00	105.50	101.90	100.00	107.70	103.90	106.80	102.00	100.00	96.80	94.20	87.95	88.30	87.40	81.85	153.00
	Low	98.40	93.60	94.00	90.40	97.20	92.00	94.00	97.20	94.90	82.30	84.75	81.80	79.30	80.10	77.50	77.50
	Close	99.20	100.50	98.40	97.80	99.00	94.35	97.30	98.10	96.20	89.20	87.00	82.55	86.40	81.15	77.85	—
1982	High	100.00	99.65	96.00	94.10	92.80	95.50	87.40	84.90	81.70	80.50	77.70	76.25	71.75	71.25		
	Low	92.80	94.00	91.35	86.70	85.20	85.80	79.80	79.40	74.85	74.00	73.00	71.10	66.70	66.10		
	Close	98.85	95.20	93.20	86.80	93.10	87.45	82.10	81.65	77.35	77.30	76.35	71.15	67.55	70.70		
1983	High	82.25	81.20														
	Low	77.00	76.80														
	Close	78.00	80.70														

Source: Commodity Exchange, Inc. of N.Y. (COMEX)

Month End Open Interest of Copper Futures at COMEX In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	45,821	46,415	48,399	47,315	54,740	49,447	49,408	51,314	60,159	59,732	56,750	55,287
1979	53,776	56,481	55,719	48,857	45,572	43,992	39,372	58,966	63,825	58,451	62,659	64,363
1980	63,132	60,834	41,546	31,618	31,923	32,454	37,303	38,497	46,737	54,201	52,666	44,225
1981	47,300	47,641	48,699	49,784	52,527	52,325	54,011	54,781	57,153	58,054	52,654	52,226
1982	56,469	60,458	62,817	67,700								
1983												

Source: Commodity Exchange, Inc. of N.Y. (COMEX)

Volume of Trading of Copper Futures at COMEX In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	75,219	88,765	119,423	112,834	117,745	135,363	98,274	160,456	95,360	158,815	151,284	95,150	1,408,688
1979	154,378	228,837	234,044	234,554	212,934	186,097	139,912	210,387	208,869	200,123	163,074	145,732	2,301,033
1980	243,069	205,232	185,692	121,708	102,054	130,678	148,698	125,062	169,370	132,850	127,110	156,556	7,848,080
1981	116,295	131,960	143,662	140,605	104,376	158,396	125,109	190,763	148,456	114,960	144,453	128,345	1,647,380
1982	112,118	166,562	135,434	179,854									
1983													

Source: Commodity Exchange, Inc. of N.Y. (COMEX)

Commodity Exchange Inc. (COMEX) Warehouse Stocks of Copper In Thousands of Short Tons

Year	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1974	5.9	3.0	1.0	7.2	5.9	10.3	7.7	10.5	10.3	14.1	16.6	34.3
1975	43.2	53.6	59.0	60.8	68.3	70.6	67.6	73.4	74.8	77.7	89.7	95.9
1976	100.1	100.1	100.9	95.9	94.7	98.6	114.1	128.2	144.0	164.2	175.8	186.5
1977	201.0	204.1	211.1	214.0	214.4	211.4	211.1	205.1	201.0	200.1	195.1	189.1
1978	184.4	181.8	182.8	178.5	175.6	175.4	177.8	180.7	181.9	180.4	179.9	185.1
1979	179.2	170.8	156.4	133.6	118.3	89.9	70.7	61.5	56.8	57.0	64.9	71.3
1980	107.8	114.1	132.0	145.7	149.8	155.5	167.3	181.7	190.8	185.4	178.6	170.9
1981	179.6	179.3	179.8	173.3	182.4	175.5	170.6	168.8	167.5	171.6	173.1	171.4
1982	187.6	189.3	193.6	195.7	198.5							

Source: Commodity Exchange, Inc.-N.Y. (COMEX)

Refined Copper Stocks in the U.S.A. In Thousands of Short Tons (Recoverable Copper Content)

Year	Jan. 1	Feb. 1	Mar. 1	April 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1969	56.6	69.2	73.9	62.4	47.2	43.8	34.7	41.8	43.6	46.2	57.0	56.2
1970	45.9	52.0	58.2	67.4	58.2	65.2	53.7	57.0	54.9	69.7	80.2	135.6
1971	160.6	173.3	174.5	164.3	131.3	110.4	70.4	59.9	61.0	80.8	100.8	106.7
1972	103.0	131.3	132.8	124.3	123.1	125.1	128.7	123.9	140.9	157.8	161.0	158.2
1973	157.4	142.6	140.4	126.1	97.2	95.0	82.2	72.0	71.5	63.1	55.3	36.5
1974	49.1	49.9	43.8	57.5	66.5	61.1	39.8	42.9	54.8	61.5	89.4	135.7
1975	194.9	242.7	259.2	297.8	320.6	334.6	338.2	349.5	341.8	312.3	314.9	324.6
1976	360.7	363.4	370.9	347.8	343.0	325.2	317.1	350.4	355.8	356.1	372.8	416.5
1977	473.8	469.3	487.0	472.3	442.1	447.6	435.0	408.9	370.6	409.4	418.0	456.9
1978	471.1	488.7	491.6	470.2	480.5	465.5	464.0	430.9	418.0	405.9	416.4	408.9
1979	367.0	318.4	287.5	262.1	237.4	197.8	176.0	174.6	158.0	154.6	148.6	167.3
1980	186.3	203.5	228.2	237.1	269.1	277.3	295.7	310.6	301.0	274.6	265.0	246.0
1981	253.0	261.6	249.4	236.8	245.5	243.4	264.7	276.9	276.0	275.5	281.6	301.2
1982[1]	338.6	351.9	375.9	387.3								
1983												

[1] Preliminary. *Source: American Bureau of Metal Statistics, Inc.*

Refined Copper Deliveries to Fabricators Outside the U.S.A.
In Thousands of Short Tons (Recoverable Copper Content)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1969	226.6	234.2	221.6	228.0	230.1	225.3	228.9	206.3	246.7	243.4	278.7	254.3	2,824
1970	213.0	202.4	239.8	210.6	244.5	239.1	228.7	232.9	240.2	210.9	239.8	233.2	2,735
1971	220.9	213.4	251.1	266.7	238.8	240.8	230.2	190.9	198.1	224.1	242.9	240.3	2,758
1972	227.9	230.8	236.2	226.0	244.8	249.7	220.5	214.8	268.0	222.8	242.5	266.1	2,850
1973	266.4	249.3	317.7	257.9	243.4	275.8	211.0	268.4	263.5	270.3	255.0	239.7	3,119
1974[2]	342.0	302.7	365.3	328.7	356.9	306.6	291.1	325.5	316.4	339.8	334.8	303.5	3,913
1975	287.7	315.0	330.4	288.8	301.9	304.8	231.1	232.8	250.4	274.3	269.2	303.0	3,389
1976	308.4	309.3	351.0	359.9	336.2	362.0	296.3	331.0	380.7	372.9	315.8	349.3	4,073
1977	331.6	305.6	405.0	342.6	364.9	360.0	326.5	344.9	339.8	350.7	374.0	390.8	4,236
1978	338.5	370.0	422.6	372.1	400.8	426.0	362.4	402.9	382.7	376.8	360.2	376.8	4,592
1979	424.2	395.9	460.4	342.0	349.1	383.3	376.8	357.7	408.5	390.2	377.6	386.4	4,658
1980	386.2	403.2	400.0	407.6	396.9	376.6	357.3	346.7	389.5	406.5	374.4	375.8	4,653
1981	339.9	353.6	383.1	385.8	381.5	382.7	346.4	355.3	393.2	369.5	376.9	364.8	4,433
1982[1]	373.5	381.0											
1983													

[1] Preliminary. [2] New series. Not comparable prior to 1974. *Source: American Bureau of Metal Statistics, Inc.*

Refined Copper Deliveries to Fabricators in the U.S.A.
In Thousands of Short Tons (Recoverable Copper Content)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1969	159.5	156.7	170.1	170.5	160.0	163.2	144.2	151.5	134.0	163.0	166.0	175.2	1,914
1970	150.7	152.1	161.9	163.3	165.5	155.6	158.0	145.3	149.5	142.5	121.5	150.6	1,817
1971	156.8	151.5	164.7	170.8	190.7	193.1	71.0	97.3	126.1	139.1	157.5	141.7	1,760
1972	134.6	151.6	180.6	164.2	181.4	186.9	148.2	145.8	163.2	180.0	172.2	176.7	1,985
1973	190.6	171.2	207.4	191.9	191.7	187.5	162.3	147.3	163.6	191.5	185.5	165.4	2,155
1974	170.7	161.8	178.4	198.4	204.1	186.4	129.5	109.5	143.1	152.3	118.8	86.1	1,911
1975	99.3	84.3	94.2	95.8	115.0	118.2	110.5	127.0	137.5	131.2	117.2	115.7	1,346
1976	137.9	132.7	206.2	175.5	171.7	158.6	150.6	134.5	151.0	150.6	122.6	137.4	1,829
1977	166.6	138.2	202.0	195.6	185.3	192.4	104.5	100.6	100.5	145.7	135.9	141.0	1,808
1978	137.7	141.3	190.2	148.7	175.9	159.8	133.4	168.9	179.2	170.4	177.7	179.7	1,963
1979	191.1	174.8	193.5	182.4	204.7	192.4	166.4	179.3	157.4	190.4	161.4	156.7	2,151
1980	173.5	153.7	193.5	167.8	176.3	175.0	98.7	85.0	83.7	106.6	128.7	154.5	1,697
1981	152.8	154.4	196.4	164.7	168.3	158.7	150.2	153.4	157.6	159.5	128.6	130.9	1,876
1982[1]	134.7	110.5	126.3										
1983													

[1] Preliminary. *Source: American Bureau of Metal Statistics, Inc.*

Refined Copper Production Outside the U.S.A. In Thousands of Short Tons (Recoverable Copper Content)

Year	Refined													Crude	
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total	Primary	Secondary
1969	222.6	200.6	219.8	216.6	234.7	229.7	217.7	215.2	212.4	209.3	224.1	238.3	2,641	3,023	76.4
1970	198.0	205.2	217.6	220.0	233.0	254.1	211.0	224.0	234.4	229.4	235.7	232.6	2,695	3,004	85.6
1971	209.2	192.7	224.7	222.4	227.1	222.3	229.9	205.1	220.1	229.9	243.9	240.5	2,668	2,948	82.3
1972	203.4	228.3	231.2	229.5	242.2	257.1	239.2	233.8	238.8	252.2	239.7	257.0	2,853	3,074	69.5
1973	220.8	205.1	260.3	238.0	241.7	236.3	254.1	261.5	234.2	275.6	251.0	265.1	2,918	3,185	89.9
1974[2]	339.3	310.0	351.5	340.0	365.6	347.4	376.2	368.5	367.6	381.4	351.5	344.5	4,244	—4,818—	
1975	323.3	299.5	348.1	336.6	330.8	314.7	303.9	305.4	318.2	338.4	311.3	335.6	3,866	—4,449—	
1976	330.3	314.3	335.3	341.0	336.7	355.1	365.3	355.7	371.7	375.2	359.3	359.2	4,199	—4,947—	
1977	358.1	352.1	380.2	363.0	383.5	386.7	361.7	379.7	372.0	367.4	388.5	393.5	4,486	—5,046—	
1978	387.3	344.0	395.9	348.7	401.9	388.1	371.9	348.4	350.0	381.9	364.5	351.5	4,434	—4,868—	
1979	359.8	347.9	360.1	336.9	345.1	364.9	358.1	377.2	366.5	400.9	388.0	382.6	4,388	—4,791—	
1980	384.2	382.8	408.4	398.3	418.7	396.8	392.2	402.9	386.1	394.4	371.8	389.9	4,727	—4,968—	
1981	359.7	347.9	393.6	390.0	388.0	391.4	377.0	377.7	378.8	379.9	366.9	393.8	4,545	—4,891—	
1982[1]	397.9	376.9													
1983															

[1] Preliminary. [2] New series. Not comparable prior to 1974. *Source: American Bureau of Metal Statistics, Inc.*

Refined Copper Production in the U.S.A. In Thousands of Short Tons (Recoverable Copper Content)

Year	Refined													Crude	
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total	Primary	Secondary
1969	173.3	164.5	178.3	160.3	160.9	155.8	156.0	149.8	160.1	181.7	167.4	177.2	1,985	1,448	198.5
1970	172.1	164.3	178.9	161.7	184.1	154.2	161.8	150.4	152.4	162.6	175.9	185.3	2,004	1,504	180.2
1971	175.6	168.4	182.6	159.5	177.4	164.2	55.4	87.5	132.7	151.2	170.0	162.6	1,787	1,315	106.8
1972	159.5	161.0	184.7	168.2	181.1	179.3	143.5	162.6	178.4	174.2	170.8	163.5	2,027	1,517	119.8
1973	168.6	165.5	185.7	165.6	185.5	173.8	154.1	151.3	151.8	173.2	158.6	163.3	1,997	1,526	120.1
1974	157.7	135.5	164.6	163.9	157.3	140.8	101.1	87.2	130.9	177.5	171.1	153.9	1,742	1,334	104.7
1975	146.0	108.8	142.8	136.5	140.8	129.9	124.7	118.2	112.7	133.3	118.3	138.8	1,551	1,239	72.6
1976	130.3	126.6	127.7	141.1	140.8	141.6	144.0	139.0	141.1	158.1	153.3	154.0	1,698	—1,445—	
1977	140.9	140.9	162.3	150.6	166.2	152.4	52.2	46.3	124.4	120.6	137.3	113.0	1,507	—1,386—	
1978	129.0	112.5	143.2	141.0	145.3	135.1	96.1	138.9	144.9	163.4	162.4	133.3	1,645	—1,434—	
1979	135.6	135.8	152.2	149.8	154.6	149.4	132.3	144.9	137.5	148.7	170.0	155.5	1,766	—1,542—	
1980	161.0	149.5	162.3	170.4	158.7	167.2	52.4	28.7	27.3	61.0	85.8	136.9	1,361	—1,205—	
1981	133.5	116.3	152.2	155.8	135.0	158.3	131.7	124.0	140.5	127.3	124.9	147.9	1,647	—1,429—	
1982[1]	117.5	123.4	121.5												
1983															

[1] Preliminary. *Source: American Bureau of Metal Statistics, Inc.*

Refined Copper Stocks Outside the U.S.A. In Thousands of Short Tons (Recoverable Copper Content)

Year	Jan. 1	Feb. 1	Mar. 1	April 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1969	316.1	313.7	285.5	305.5	300.7	311.6	320.1	315.6	323.0	314.4	291.0	237.5
1970	234.7	235.4	245.4	233.9	255.4	259.5	291.5	280.2	284.1	279.0	307.0	305.8
1971	318.6	330.8	327.7	332.7	314.2	313.4	308.9	306.1	314.1	327.6	331.4	342.2
1972	371.8	349.0	358.1	368.2	380.1	378.2	378.8	400.9	422.4	394.2	420.1	421.8
1973	410.3	361.4	322.4	263.0	249.7	250.5	215.8	267.9	274.0	249.4	255.8	261.8
1974[2]	348.7	320.9	323.4	311.5	320.6	332.7	370.3	444.0	459.4	494.4	526.9	543.1
1975	591.2	628.8	624.5	655.8	723.1	766.0	784.7	861.5	933.4	1,007	1,072	1,108
1976	1,135	1,150	1,149	1,086	1,048	1,045	1,040	1,080	1,112	1,102	1,102	1,141
1977	1,117	1,158	1,200	1,166	1,183	1,185	1,195	1,210	1,229	1,247	1,240	1,225
1978	1,201	1,231	1,139	1,139	1,104	1,099	1,052	1,059	1,001	960.2	962.0	963.1
1979	942.2	878.2	862.4	765.1	758.8	756.7	727.2	687.1	696.6	648.2	635.4	641.3
1980	619.5	598.3	560.9	534.6	516.5	525.9	531.2	530.9	553.2	527.9	489.1	472.6
1981	476.2	485.2	471.0	463.0	458.8	449.8	446.0	454.9	454.7	433.4	419.4	403.0
1982[1]	432.5	445.9	444.5									
1983												

[1] Preliminary. [2] New series. Not comparable prior to 1974. *Source: American Bureau of Metal Statistics, Inc.*

Corn

The 1981 U.S. corn crop was a record-large 8.201 billion bushels, up 23 percent from 1980's drought-stricken crop and 3 percent above the previous record in 1979. The crop was seeded late in the eastern Corn Belt, but excellent growing conditions during the season resulted in a record U.S. yield of 109.9 bushels per harvested acre, 18.9 more than a year ago.

Planted area in 1981 of 84.2 million acres was virtually the same as in 1980 and acres harvested for grain were up 2 percent at 74.6 million. The proportion of planted acres harvested for grain was 89 percent, 2 percent more than in 1980. Abundant rainfall meant less abandonment and increased vegetative growth. Consequently, less acreage was needed to meet silage demands.

The planting season began under generally favorable conditions, except in Indiana and Ohio, where excessive rains delayed plantings. Although the Corn Belt received abundant rainfall and moderate temperatures favorable for growing corn, crop development and progress lagged behind normal for most of the season. With the exception of Indiana, Ohio, and South Dakota, all states in the Corn Belt had record-high yields in 1981.

Harvest in the Corn Belt was delayed by cool, wet weather that slowed maturity. However, the frost held off until October in most areas, enabling corn to reach maturity. Overall, it was an excellent year, with good growing conditions and record yields in many states.

Corn disappearance was projected at 7.2 billion bushels in 1981/82, a slight decrease from the preceding season. Domestic feed and residual disappearance during October–December was 6 percent above a year earlier, but for the year, the increase could only be 3 percent.

Although livestock numbers were expected to decline for the 1981/82 feeding year, feeding rates could exceed 1980/81 levels because of the more severe winter and slightly improved feeding margins. Feed and residual disappearance was estimated at 4.25 billion bushels, up 3 percent from 1980/81. Exports were expected to decline 8 percent from the preceding season because of sluggish import demand and credit problems in several countries. Greater use of corn for gasohol and sweetener production was expected to boost domestic food and industrial use to 785 million bushels, 50 million above a year earlier.

Corn stocks on January 1, 1982, totaled a record 6.9 billion bushels, up 18 percent from a year ago, but only slightly above January 1, 1980. Indicated disappearance during October–December 1981 totaled 2,335 million bushels, down 3 percent from the comparable quarter a year earlier. Ending stocks for 1981/82 were estimated at 1,976 million bushels, 942 million above 1980/81. This forecast represented 27 percent of crop-year utilization. In the most recent 4-year period, the ending stocks/use ratio averaged 18 percent, including a 1980/81 ratio of 14 percent.

Even though ending stocks were projected at record levels, free stocks were expected to be tight because of heavy producer use of the "regular" loan and farmer-owned reserve programs. The result should be some price strength as the season progresses. Prices at the farm were likely to average $2.40 to $2.55 per bushel, compared with the record $3.11 in 1980/81. For the first quarter of the crop year, farm prices averaged $2.39. There was virtually no change early in the second quarter.

Corn prices weakened starting in the summer of 1981, as crop prospects improved and demand prospects deteriorated. The prospective stock buildup, coupled with light export shipments, depressed market prices. Poor feeding margins and high interest rates discouraged livestock feeders. The only aspect of market strength was the reluctance of farmers to sell corn, and the accompanying movement of corn into the farmer-owned reserve program. Strength from the livestock and poultry sectors were expected later in the marketing year if feeding margins improved. In the spring of 1982 the possibility of price strength was focused on developments in international markets, planting and growing weather, farmers' extensive use of the reserve program, and farmer participation in the acreage set-aside program for the 1982 crop.

Producers reported intentions of planting 84.7 million acres of corn for all purposes in 1982, up 1 percent from 1981. However, these intentions were reported before details of the 1982 acreage set-aside program were announced. Actual 1982 plantings were considered unlikely to meet intentions.

U.S. Government Price Support

The Agriculture and Food Act of 1981 provides authorization for the corn price support program for 4 years beginning with the 1982/83 crop year. Under provisions of the act, the 1982/83 "regular" loan rate was set at $2.55 per bushel, an increase of $.20 from the previous year. The Grain Reserve loan rate was increased $.50 from the 1981 level to $2.90 per bushel. The "trigger" release price for 1982 crop corn in the Grain Reserve was set at $3.25 per bushel. Producers may redeem their corn from the Reserve without penalty if the national average farm price is at or above the "trigger" price. Producers who enter their corn in the Reserve will immediately receive a first year storage payment of 26½ cents per bushel. The 1982 crop is eligible for immediate entry in the Reserve. The "trigger" price for 1981 crop corn in the Reserve is $3.15 per bushel.

The 1982 target price was set at $2.70 per bushel, up from $2.40 in 1981. Deficiency payments will be made to producers if the national weighted average market price received by farmers during the first 5 months of the marketing year is below the target price. The payment rate is determined by the difference between the target price and the higher of the national weighted average market price or the "regular" loan rate.

Producers were eligible for "regular" and Reserve loans and target price protection in 1982 only if they complied with the 1982 10-percent feed grain acreage set-aside program. Producers had until April 16, 1982 to enroll their acreage in the program. Producers had until August 1982 to certify compliance of their acreage in the program.

Futures Markets

Corn futures are traded on the Chicago Board of Trade and on the MidAmerica Commodity Exchange.

World Production of Corn or Maize In Millions of Metric Tons

Crop Year	United States	Argentina	Brazil	Mexico	South Africa	France	China	India	Italy	Bulgaria	Hungary	Yugoslavia	Romania	Indonesia	U.S.S.R.	World Total
1969–0	119.1	9.4	14.2	6.5	6.2	5.7	24.3	5.7	4.5	2.4	4.8	7.8	7.7	2.3	10.1	260.0
1970–1	105.5	9.9	13.5	8.7	8.6	7.6	26.4	7.5	4.8	2.4	4.0	6.9	6.5	2.9	7.8	255.1
1971–2	143.3	5.9	12.9	9.1	9.4	8.8	25.3	5.1	4.5	2.5	4.7	7.4	7.9	2.6	8.6	292.1
1972–3	141.6	9.0	13.8	8.1	4.2	8.2	22.0	6.2	4.8	2.9	5.5	7.9	9.5	2.0	9.8	286.3
1973–4	143.4	9.9	15.0	9.0	11.1	10.7	28.0	5.8	5.1	2.6	5.9	8.3	7.4	2.9	13.2	314.7
1974–5	118.5	7.7	16.4	7.8	9.1	8.7	30.7	5.6	5.0	1.6	6.2	8.0	7.4	3.0	12.1	286.5
1975–6	147.3	5.9	17.9	9.2	7.3	8.2	32.0	7.0	5.3	3.0	7.1	9.4	9.2	2.6	7.3	321.6
1976–7	157.9	8.3	18.8	9.6	9.7	5.5	31.4	6.3	5.3	3.0	5.2	9.1	11.6	2.6	10.1	336.3
1977–8	161.8	9.7	13.6	9.7	10.2	8.6	49.5	5.9	6.4	2.6	6.0	9.9	10.1	3.0	11.0	364.9
1978–9	180.0	9.0	16.3	10.2	8.3	9.5	55.9	6.2	6.2	2.2	6.7	7.6	10.2	4.0	9.0	390.9
1979–0	201.7	6.4	20.2	9.2	10.8	10.4	60.0	5.0	6.2	3.2	7.4	10.1	12.5	3.3	8.4	422.9
1980–1[1]	168.8	9.4	22.6	10.4	14.2	9.5	59.7	6.0	6.4	2.8	6.7	9.3	9.4	3.1	9.5	403.0
1981–2[2]	208.3		23.6	11.4	9.0		59.0								8.4	436.6
1982–3																

[1] Preliminary. [2] Estimated. *Source: Foreign Agricultural Service, U.S.D.A.*

Acreage and Supply of Corn in the United States In Millions of Bushels

Year Beginning October	Planted All Purposes	Harvested For Grain	Harvested For Silage	Harvested For Forage	Yield, Per Harv. Acre-Bus.	Carry-over, October 1 Farm	Carry-over, October 1 CCC Bins	Carry-over, October 1 Others[3]	Carry-over, October 1 Total	Grain Production	Imports[2]	Total (All Supply Grain)
	In Millions of Acres											
1969–0	64.3	54.6	7.9	.6	85.9	728.2	143.3	241.9	1,113	4,687	1.0	5,806
1970–1	66.9	57.4	8.1	.7	72.4	575.6	111.3	318.3	1,005	4,152	4.0	5,161
1971–2	74.2	64.1	8.8	.7	88.1	426.7	24.5	215.5	667	5,646	1.0	6,309
1972–3	67.1	57.5	8.4	.5	97.0	751.3	26.3	348.7	1,126	5,580	1.0	6,700
1973–4	72.3	62.1	9.0	.6	91.3	404.6	20.3	283.7	709	5,671	1.0	6,380
1974–5	77.9	65.4	10.8	.6	71.9	287.6	—— 195.1 ——		483	4,701	1.8	5,187
1975–6	78.7	67.6	9.8	.6	86.4	191.3	—— 168.2 ——		359	5,841	1.8	6,204
1976–7	84.6	71.5	11.3	.9	88.0	229.8	—— 169.4 ——		399	6,289	2.5	6,691
1977–8	84.3	71.6	9.3	.6	90.8	446.1	—— 438.0 ——		884	6,505	2.6	7,394
1978–9	81.7	71.9	8.6	.4	101.0	659.3	—— 444.7 ——		1,104	7,268	1.2	8,381
1979–0	81.4	72.4	8.0	.4	109.7	794.5	—— 1,103.9 ——		1,304	7,939	1.1	9,244
1980–1	84.0	73.0	9.2	.6	91.0	920.9	—— 696.6 ——		1,617	6,648	1.2	8,264
1981–2[1]	84.2	74.6	8.2	.4	109.9	490.1	—— 543.8 ——		1,034	8,201	1.3	9,236
1982–3[4]	84.7											

[1] Preliminary. [2] Includes grain equivalent of cornmeal & flour. [3] Interior mills & elevators and terminal mkts. [4] Estimate. *Source: Commodity Economics Division, U.S.D.A.*

Corn Production Estimates and Disposition and Value in the U.S.

Crop Year	Corn for Grain Production Estimates July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1	Final	Farm Disposition Feed & Seed	Farm Disposition Sold[1]	Season Avg. Price[1] $ Per Bu.	Chicago White No. 3 $ Per Bu.	Value of Production (Million Dollars)
	In Thousands of Bushels							In Millions of Bushels				
1969–0	4,286,285	4,309,776	4,312,267	4,350,257	4,444,199	4,577,864	4,687,057	2,130	2,557	1.15	1.75	5,416
1970–7	4,819,999	4,692,864	4,402,765	4,188,281	4,103,973	4,109,792	4,152,243	1,888	2,264	1.33	1.94	5,515
1971–2	————	5,345,057	5,265,641	5,399,670	5,551,769	5,540,253	5,646,260	2,447	3,200	1.08	1.26	6,101
1972–3	5,042,048	4,947,986	5,124,425	5,265,817	5,400,390	5,473,727	5,579,832	2,328	3,252	1.57	2.48	8,743
1973–4	————	5,661,379	5,768,407	5,762,927	5,678,141	5,643,256	5,670,712	2,217	3,453	2.55	3.66	14,463
1974–5	————	4,965,950	4,994,730	4,717,600	4,621,248	4,651,167	4,701,402	1,755	2,947	3.03	4.09	14,232
1975–6	6,045,621	5,849,662	5,687,248	5,737,266	5,803,596	5,766,991	5,840,757	2,117	3,712	2.54	2.92	14,818
1976–7	6,552,665	6,186,979	5,891,823	5,865,243	6,063,459	6,216,032	6,289,169	2,329	3,960	2.15	2.91	13,524
1977–8	6,330,668	6,092,054	6,229,084	6,303,034	6,366,864	6,357,424	6,505,041	2,548	3,957	2.02	3.30	13,107
1978–9	6,145,421	6,503,190	6,797,650	6,823,720	6,890,310	7,081,849	7,269,921	2,836	4,432	2.25	2.93	16,281
1979–0	6,662,681	7,108,938	7,268,175	7,390,365	7,585,535	7,763,771	7,938,819	2,976	4,963	2.52	4.70	19,904
1980–1[2]	7,284,036	6,645,842	6,534,370	6,466,622	6,461,244	6,647,534	6,644,841	2,502	4,146	3.11		21,687
1981–2[2]	7,115,069	7,734,941	7,940,421	8,081,444	8,097,231	8,200,951				2.50		
1982–3												

[1] Includes an allowance for unredeemed loan & purchase agreement deliveries valued at the average loan rate. [2] Preliminary. *Source: Economic Research Service; Crop Reporting Board, U.S.D.A.*

CORN

U.S. Corn Supply and Disappearance In Millions of Bushels

Year & Periods Begin Oct. 1	Supply				Disappearance: Domestic Use					Disappearance		Ending Stocks		
	Beginning Stocks	Production	Imports	Total Supply	Food	Alc. Beverages	Seed	Feed	Total	Exports	Total Disappearance	Gov't. Owned[1]	Privately Owned[2]	Total
1977–8	885.9	6,505	2.6	7,394	500.0	70.4	19.5	3,744	4,334	1,948	6,282	13.1	1,098	1,111
Oct.–Dec.	885.9	6,505	.7	7,392	115.0	15.7	—	1,290	1,421	418.3	1,839	.2	5,552	5,552
Jan.–Mar.	5,552	—	.9	5,553	120.0	17.0	3.9	1,088	1,229	414.5	1,644	.2	3,909	3,909
Apr.–May	3,909	—	.3	3,910	85.0	13.4	11.7	568.3	678.4	370.2	1,049	.2	2,861	2,861
June–Sept.	2,861	--	.7	2,862	180.0	24.3	3.9	797.4	1,006	744.8	1,750	13.1	1,098	1,111
1978–9	1,111	7,268	1.2	8,381	531.2	69.3	19.5	4,324	4,944	2,133	7,077	99.7	1,204	1,304
Oct.–Dec.	1,111	7,268	.1	8,379	132.8	17.1	—	1,456	1,606	454.0	2,060	77.3	6,242	6,319
Jan.–Mar.	6,319	—	.4	6,320	116.9	16.9	3.9	1,255	1,393	426.3	1,819	98.8	4,402	4,500
Apr.–May	4,500	—	.2	4,501	90.3	13.0	11.7	711.2	826.2	387.2	1,213	100.6	3,187	3,287
June–Sept.	3,287	—	.5	3,288	191.2	22.3	3.9	900.8	1,118	865.6	1,984	99.7	1,204	1,304
1979–0	1,304	7,939	1.1	9,244	582.8	72.2	20.0	4,519	5,194	2,433	7,626	256.3	1,361	1,618
Oct.–Dec.	1,304	7,939	.3	9,243	128.2	16.3	—	1,549	1,694	662.9	2,357	99.7	6,787	6,886
Jan.–Mar.	6,886	—	.3	6,887	116.6	18.4	4.0	1,308	1,447	582.0	2,029	101.2	4,756	4,857
Apr.–May	4,857	—	.1	4,857	93.2	13.9	12.0	682.3	801.4	385.6	1,187	180.5	3,490	3,670
June–Sept.	3,670	—	.4	3,671	244.8	23.6	4.0	978.8	1,251	802.1	2,053	256.3	1,361	1,618
1980–1[3]	1,618	6,645	1.2	8,264	641.8	73.1	20.2	4,139	4,874	2,355	7,230	237.8	796.2	1,034
Oct.–Dec.	1,618	6,645	.2	8,263	136.3	16.2	—	1,523	1,676	727.8	2,404	254.3	5,605	5,859
Jan.–Mar.	5,857	—	.3	5,859	116.3	18.6	4.0	1,100	1,239	632.9	1,872	250.0	3,737	3,987
Apr.–May	3,997	—	.1	3,987	106.7	13.8	12.2	684.7	817.4	395.7	1,213	251.6	2,523	2,774
June–Sept.	2,774	—	.6	2,775	282.5	24.5	4.0	831.0	1,142.0	598.8	1,741	237.8	796.2	1,034
1981–2[3]	1,034	8,201	1.3	9,236	691.8	73.0	20.2	4,250	5,035	2,175	7,210			2,026
Oct.–Dec.	1,034	8,201	.4	9,235	153.8	16.2	—	1,620	1,790	545.5	2,335	247.6	6,652	6,900
Jan.–Mar.														
Apr.–May														
June–Sept.														

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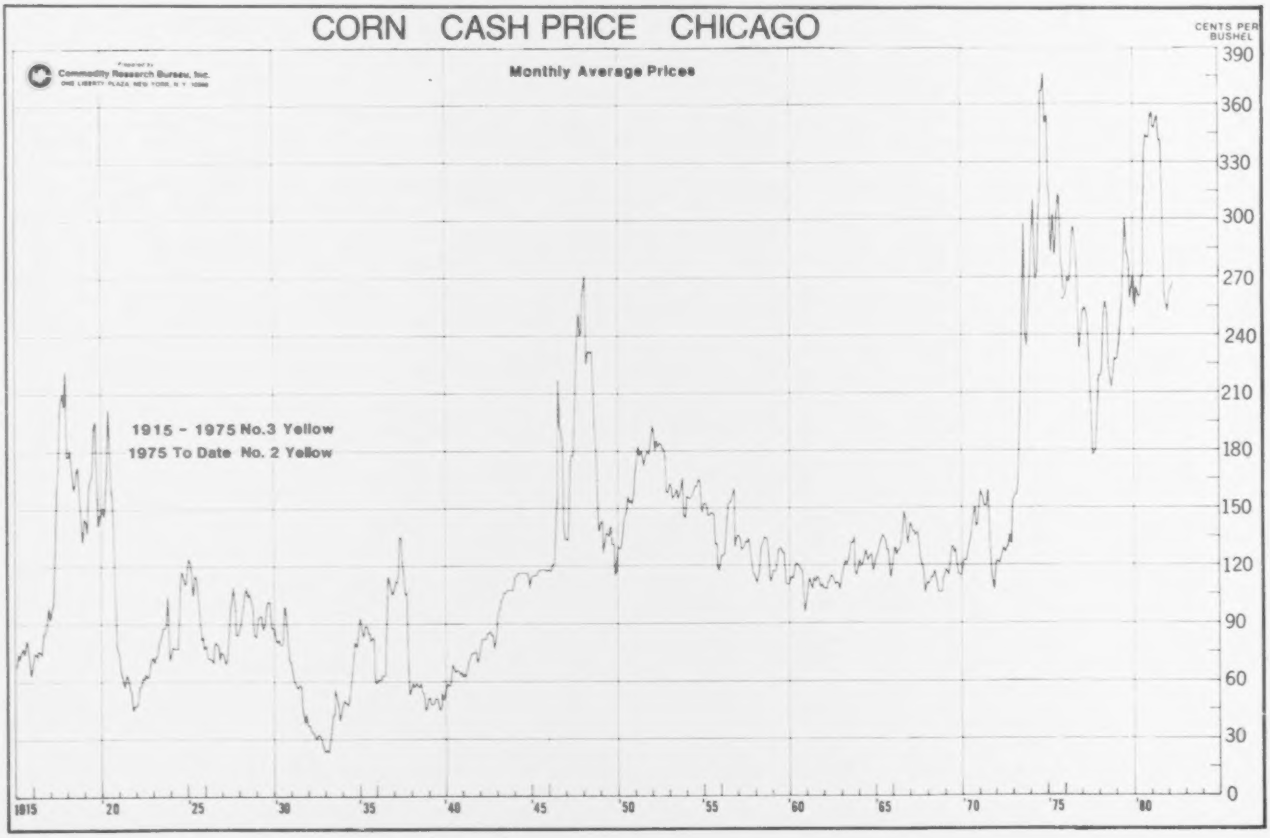
[1] Uncommitted inventory. [2] Includes quantity under loan & farmer-owned reserve. [3] Preliminary.

Source: Commodity Economics Division, U.S.D.A.



CORN CASH PRICE CHICAGO

Distribution of Corn in the United States In Millions of Bushels

Year Beg. Oct.	Shipments											Exports (Incl. Grain Equiv. of Pdt's.)		
	Wet Corn Milling (Grind)	Corn Meal[4]	Corn Flour Etc.	Hominy Grits (Food)	Break-fast Foods[3]	Distilled Liquors	Fer-mented Malt Liquors	Fuel Alco-hol	Total Ship-ments	Seed	Live-stock Feed[5]		Total Utiliza-tion	Domestic Disappear-ance
1970–1	242	24	8	17	23	24	45	0	383	17	3,581	517	4,494	3,977
1971–2	246	21	10	14	24	25	45	0	385	15	3,997	796	5,183	4,387
1972–3	284	20	12	13	24	29	45	0	427	16	4,304	1,258	5,991	4,733
1973–4	295	19	14	13	25	33	47	0	446	18	4,205	1,243	5,896	4,653
1974–5	315	18	13	10	24	16	49	0	445	18	3,226	1,149	4,826	3,677
1975–6	343	18	15	11	24	21	50	0	482	20	3,603	1,711	5,804	4,093
1976–7	362	17	17	10	25	21	53	0	505	20	3,608	1,684	5,805	4,121
1977–8	398	121				21	30	0	570	20	3,744	1,948	6,282	4,334
1978–9	425	124				21	30	0	601	20	4,324	2,133	7,077	4,944
1979–0[2]	455	127				20	31	22	655	20.2	4,519	2,433	7,626	5,194
1980–1[1]	487	131				20	31	60	715	20.2	4,139	2,355	7,230	4,874
1981–2[1]									765	20.2	4,250	2,175	7,210	5,035
1982–3														

[1] Preliminary. [2] Estimate. [3] Assumes sizeable quantities of corn flour are purchased by breakfast food mfg. from the dry milling industry. [4] Regular & degermed. [5] Feed & waste (residual, mostly feed).
Source: Commodity Economics Division, U.S.D.A.

Corn (Shelled & Ear) Stocks in the United States In Millions of Bushels

Year	On Farms				Off Farms				Total Stocks			
	Jan. 1	Apr. 1	June 1[3]	Oct. 1[2]	Jan. 1	Apr. 1	June 1[3]	Oct. 1[2]	Jan. 1	Apr. 1	June 1[3]	Oct. 1[2]
1970	3,390	2,263	1,426	576	993	768	520	430	4,383	3,031	1,945	1,005
1971	2,755	1,875	1,179	427	1,013	670	394	240	3,769	2,545	1,572	667
1972	3,551	2,483	1,589	751	1,149	869	584	375	4,700	3,381	2,173	1,126
1973	3,689	2,385	1,373	405	1,141	955	564	304	4,831	3,340	1,937	709
1974	3,357	2,012	1,063	288	1,116	850	381	195	4,473	2,861	1,443	483
1975	2,541	1,509	804	191	1,080	705	346	168	3,621	2,214	1,150	359
1976	3,196	1,920	1,290	233	1,270	913	577	166	4,467	2,833	1,867	399
1977	3,345	2,134	1,578	446	1,544	1,159	787	438	4,890	3,293	2,365	884
1978	3,824	2,517	1,849	659	1,679	1,360	989	445	5,503	3,877	2,837	1,104
1979	4,638	3,178	2,318	794	1,681	1,322	969	509	6,319	4,500	3,287	1,304
1980	5,042	3,441	2,578	921	1,844	1,416	1,093	697	6,886	4,857	3,670	1,617
1981[1]	4,141	2,641	1,818	490	1,717	1,346	956	544	5,859	3,987	2,774	1,034
1982[1]	4,966	3,570			1,933	1,504			6,899	5,074		
1983												

[1] Preliminary. [2] Old crop only. [3] Data prior to 1976 are *as of July 1.* *Source: Crop Reporting Board, U.S.D.A.*

Production of Corn (For Grain) in the United States, by States In Millions of Bushels

Year	Illi-nois	Indi-ana	Iowa	Kan-sas	Ken-tucky	Michi-gan	Minn.	Mis-souri	Ne-braska	No. Car.	Ohio	Pa.	South Dakota	Wis-consin	Texas
1970	735.6	374.1	866.6	82.2	47.0	115.7	384.3	173.1	366.9	70.0	240.2	81.3	100.2	152.4	—
1971	1,067	556.4	1,178	124.5	91.1	119.4	475.2	272.1	450.5	89.2	322.6	77.7	120.8	225.8	—
1972	1,015	507.9	1,230	130.0	83.2	142.9	455.6	227.5	534.0	102.4	284.3	64.8	154.5	203.6	—
1973	981.6	534.5	1,207	154.0	85.9	146.5	513.4	228.8	554.6	114.8	243.2	81.1	146.3	173.5	—
1974	811.8	387.6	968.0	131.9	88.2	118.5	365.8	146.3	399.0	117.8	265.5	89.1	76.9	161.2	—
1975	1,254	551.7	1,118	141.0	87.8	167.2	407.4	170.1	503.2	106.5	310.6	88.6	83.3	198.4	—
1976	1,240	693.0	1,174	171.8	138.7	153.9	330.4	173.9	518.5	150.4	393.5	103.5	37.2	151.0	186.0
1977	1,163	633.4	1,092	161.3	132.3	197.2	600.0	201.4	648.5	88.7	380.1	106.7	126.9	291.2	161.7
1978	1,240	669.6	1,478	153.0	119.9	194.4	643.8	200.1	762.8	121.6	379.1	115.9	177.6	294.0	144.0
1979	1,414	675.4	1,664	172.0	132.6	237.5	606.0	240.0	822.3	128.4	417.5	121.6	210.9	317.2	132.3
1980	1,066	602.9	1,463	110.9	103.6	247.0	610.1	109.7	603.5	103.8	440.7	96.0	121.9	348.4	117.0
1981[1]	1,453	654.0	1,740	158.8	149.0	273.6	744.7	213.4	802.7	140.9	360.0	134.4	180.6	378.0	127.5
1982															

[1] Preliminary, December estimate. *Source: Crop Reporting Board, U.S.D.A.*

CORN

Corn Under Price Support through the End of the Month (Cumulative Totals from Current Season's Crop)
In Millions of Bushels

Crop Year	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Total
1970–1		22.3	91.6	171.9	280.2	297.8	310.3	316.1	318.9	320.8	322.0	—	—	324.0
1971–2		60.2	313.2	585.9	833.9	881.8	907.6	918.9	923.5	937.2	950.4	—	—	952.0
1972–3		20.7	100.4	245.3	360.2	395.5	438.0	417.8	419.3	419.8	—	—	—	420.0
1973–4		12.8	109.5	183.0	244.4	253.4	257.4	259.7	260.3	260.5	—	—	—	
1974–5		9.3	24.4	49.6	69.2	69.2	71.6	75.2	76.6	76.8	—	—	—	
1975–6		18.7	52.7	112.1	137.3	142.8	145.9	146.6	147.0	147.0	147.0	—	—	
1976–7	1.5	18.5	102.6	204.8	238.0	252.8	261.1	266.4	272.5	274.5	—	—	—	
1977–8	31.31	90.3	517.8	710.0	903.2	966.9	1,007	1,018	1,032	1,041	1,045	—	—	
1978–9	9.51	57.4	303.6	458.5	583.5	605.0	616.2	627.1	629.7	637.5	639.5	639.8	—	
1979–0	2.2	17.3	106.1	206.3	347.8	409.5	461.7	488.8	539.1	545.8				
1980–1	2.3	44.6	145.0	386.0	746.7	795.2	816.0	830.6	836.0	838.1				
1981–2	13.5	81.9	418.7	1,049	1,642	1,826	1,903							
1982–3														

Source: U.S. Department of Agriculture

Corn Price Support Data in the United States

								Stocks at Close of Mkt. Year (Sept. 30)					CCC Inventory As of Dec. 31	
Year Begin. Oct. 1	National Avg. Loan Rate	Grain Reserve Loan Rate	Target Price	Placed Under Loan	Redemptions	Resealed	Total Deliveries[2]	CCC Inventory	Under CCC Loan	Farmer Owned Reserve	"Free" Stocks	Total Stocks	CCC Owned	Under CCC Loan
	¢ Bush.			Millions of Bushels										
1969–0	135	—	—	398.0	289.8	106.2	2	254.9	346.2	0	404.1	1,005.2	296.4	567.0
1970–1	135	—	—	323.3	205.8	112.3	6	105.0	237.6	0	324.1	666.7	215.4	454.2
1971–2	135	—	—	954.4	559	377	16	160.1	536.7	0	430.1	1,126.9	141.5	761.0
1972–3	141	—	—	419.7	—			79.1	89.8	0	539.0	707.9	140.5	735.0
1973–4	164	—	—	260.6	—			7.3	5.3	0	471.3	483.9	0.9	189.7
1974–5	110	—	—	76.8	77			0.3	0.6	0	360.5	361.4	6.6	48.6
1975–6	110	—	138	147.0	147			0.1	23.4	0	376.2	399.7	0.4	110.3
1976–7	150	—	157	266	267			0	148.2	0	737.7	885.9	0.1	206.3
1977–8	200	—	200	1,159	689		94	13.1	415.3	315.5	367.5	1,111.4	0.5	765.0
1978–9	200	—	210	642	582		2	99.7	115.7	549.9	538.6	1,303.9	77.3	1,038.0
1979–0	210	—	220	557	524		[3]	256.3	82.6	636.4	642.2	1,617.5	99.7	801.0
1980–1[1]	225	240	235	840	731		18	237.8	100.8	185.4[4]	510.0	1,034.0	256.3	966.0
1981–2[1]	240	255	240	1,744	25		0						237.8	
1982–3[1]	255	290	270											

[1] Preliminary. [2] Includes "delivered to CCC" from original program and deliveries from reseal program and over-deliveries as determined by weight of farm-stored grain when delivered to CCC. [3] Less than 500,000 bushels. [4] Called Reserve Corn under extended loan. *Source: Agricultural Stabilization and Conservation Service, U.S.D.A.*

Average Price Received by Farmers for Corn in the U.S. In Cents Per Bushel

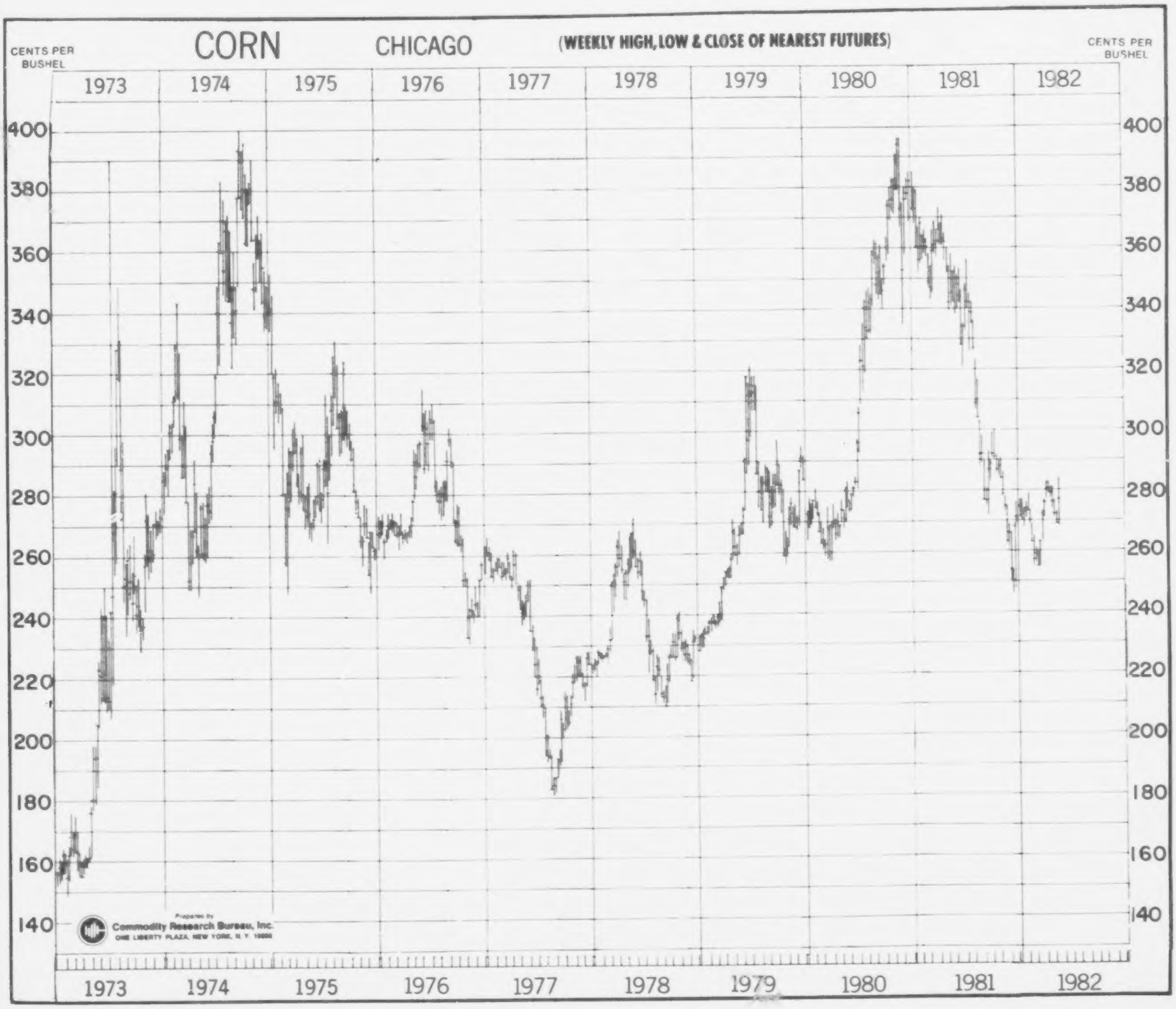
Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Average[1]
1970–1	134	129	136	142	143	143	141	138	143	136	119	111	133
1971–2	100	97	108	109	109	110	113	115	113	114	115	122	108
1972–3	119	120	142	139	135	137	142	161	199	203	268	215	157
1973–4	217	218	239	259	276	268	241	245	257	291	337	330	255
1974–5	345	332	327	307	286	267	268	266	268	272	295	276	303
1975–6	262	233	237	244	248	250	246	261	274	282	264	260	254
1976–7	233	202	224	234	234	235	231	225	212	188	163	160	215
1977–8	167	188	197	200	203	215	224	229	228	216	201	198	202
1978–9	197	202	209	211	218	222	227	235	249	264	254	251	225
1979–0	241	227	238	245	239	240	236	242	249	273	292	301	252
1980–1	299	310	319	319	322	325	324	324	317	314	287	255	310
1981–2	245	234	239	254	244	246	251						
1982–3													

[1] Weighted average by sales. *Source: Crop Reporting Board, U.S.D.A.*

Average Cash Price of Corn, No. 2 Yellow[3] at Chicago In Cents Per Bushel

Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Average[1]
1969–0	116	115	115	122	123	122	126	130	134	138	147	150	125
1970–1	140	141	152	159	157	155	151	151	159	149	129	115	144
1971–2	110	107	121	122	121	123	126	129	127	129	130	136	118
1972–3[3]	132	133	157	158	159	159	165	201	242	252	291	247	191
1973–4	237	250	268	290	313	299	269	270	293	335	363	355	295
1974–5	374	348	347	319	296	290	296	282	289	295	312	299	312
1975–6	274	259	259	262	270	268	268	284	296	296	287	277	275
1976–7	249	233	244	253	254	252	250	241	227	205	178	180	230
1977–8	184	214	219	219	221	236	251	257	251	228	217	213	226
1978–9	222	228	227	229	235	242	253	266	283	300	282	278	254
1979–0	273	259	269	254	265	260	261	270	270	308	336	344	281
1980–1[2]	343	343	354	356	349	348	353	347	341	341	309	272	338
1981–2	261	260	252	263	263	267							
1982–3													

[1] Weighted average by carlot sales. [2] Preliminary. [3] Prices prior to 1972–3 are for NO. 3 YELLOW AT CHICAGO.
Source: Economic Research Service, U.S.D.A.



CORN

High, Low & Closing Prices of May Corn Futures at Chicago In Cents per Bushel

Year of Delivery	Year Prior to Delivery										Delivery Year					Life of Delivery Range
	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	
1978 High	279	286¾	271½	270	250¾	222¼	222½	228¾	238½	233¾	232¼	231¼	257¼	267¾	265¾	278
Low	272½	265½	257	242¼	214	203¼	205¼	216	228	223	224½	228	228½	245	245¼	203¼
Close	273¼	271¼	265½	243¾	214¼	205½	217	227¾	231½	226¾	229¾	228½	256¼	250¾	262¼	—
1979 High	—	271	286½	281¾	265½	249	243½	256¼	251½	247¾	244¾	250¾	252	260	270¾	286½
Low	—	251¾	251½	263¼	246¼	230½	232¼	241½	242	237¾	236¼	242¼	242½	249¼	255½	230½
Close	—	256	283	266½	249	236¼	243	249¾	246¼	240½	243½	246¾	251½	259¼	261¼	—
1980 High	279	287¼	295	336	341½	307½	306¼	318	307½	305½	302¾	294	280	276	277	341½
Low	272½	275¾	279½	285½	288	283½	287¾	286	287¼	294¼	277	276	256½	257¾	265¼	256½
Close	278½	287¼	287	319	292	303½	303¼	293¼	302½	301	287¾	276¼	258¼	265¾	271¾	—
1981 High	325	322	325	318	358	369½	379	394	418	416½	393	380	369	372½	363½	418
Low	311	308¾	311¾	307	318¼	341½	357	358	385¼	354¼	362½	365	350¼	355½	339	307
Close	312½	312¾	313	318	356¾	368¾	365¼	385¾	415¾	385¼	364¾	369¾	364¾	361	341	—
1982 High	398¼	410¾	398	385¾	395½	370¾	338¼	338¼	320½	297½	287½	291	275½	283¼		
Low	385	385¼	371¼	360¾	364¼	323	310	315½	290¾	262½	277½	269¼	265¼	274		
Close	397¾	390½	380¾	366	370¾	333¾	318½	318½	291	281	285½	270	274¼	276		
1983 High	317½	322½														
Low	310	313¼														
Close	316	313¼														

Source: Chicago Board of Trade

Month End Open Interest of Corn Futures at Chicago In Millions of Bushels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	657.5	705.9	754.8	673.1	784.2	569.2	552.3	544.0	632.0	758.4	667.8	644.0
1979	680.9	720.3	784.2	810.7	859.6	951.3	898.7	889.8	860.0	899.8	857.3	836.2
1980	838.9	799.0	789.8	787.7	766.7	721.6	1,048.8	1,382.4	1,398.0	1,587.9	1,575.5	1,315.0
1981	1,216.5	1,107.5	1,002.4	846.5	737.5	572.6	568.8	637.8	637.7	724.7	674.6	630.7
1982	708.0	625.6	650.0	610.0								
1983												

Source: Chicago Board of Trade

Volume of Trading of Corn Futures at Chicago In Millions of Bushels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	1,755	1,599	3,405	3,255	3,159	3,147	2,495	2,663	1,989	2,729	2,723	1,716	30,635
1979	1,734	2,281	2,739	3,302	3,751	5,705	5,806	3,999	3,135	4,522	3,794	2,592	43,386
1980	3,287	3,227	3,493	3,690	3,265	3,362	6,722	7,310	6,287	6,609	6,455	6,027	59,735
1981[1]	4,848	4,495	4,796	5,222	3,867	4,785	5,459	5,019	3,626	3,127	3,913	3,978	53,375
1982[1]	2,802	3,390	3,634	3,355									
1983													

[1] Preliminary. *Source: Chicago Board of Trade*

U.S. Exports[2] of Corn (Including Seed), By Country of Destination In Thousands of Metric Tons[3]

Yr. Begin. October	USSR	Belg. & Luxem.	Canada	Egypt	W. Germany	Greece	Israel	Italy	Japan	Mexico	Netherlands	Norway	Spain	United Kingdom	Total All Exports
1973–4	129	5	51		122	35	7	85	251	48	137	3	101	38	1,226
1974–5	40	13	37		115	20	9	107	206	48	154	3	104	27	1,125
1975–6	414	35	30		172	29	11	102	228	39	163	4	86	45	1,699
1976–7	115	80	16		209	38	13	90	301	56	182	3	41	111	1,668
1977–8[3]		1,601	232	731	2,501	1,046	395	2,065	8,610		2,870	57	1,670	2,034	49,156
1978–9		2,023	364	617	1,435	1,186	258	1,503	8,979		2,193	63	1,747	1,990	53,903
1979–0[1]		1,622	602	874	1,521	1,121	562	2,078	11,196		2,108	36	2,506	1,828	61,440
1980–1															

[1] Preliminary. [2] Exports of grain only. Does not include corn exported under the food for relief or charity program. [3] Data prior to 1977–8 are in millions of bushels. *Source: Foreign Agricultural Service, U.S.D.A.*

Corn Oil

Supply & Distribution of Corn Oil In Millions of Pounds

Year Beginning Oct.	Supply				Disappearance									
					Food Uses					Non-Food Uses				
	Production	Imports	Stocks Oct. 1	Total Supply	Shortening	Margarine	Salad & Cooking Oil	Other	Total Food Uses	Foots & Loss	Other	Total Non-Food Uses	Total Domestic Disappearance	Total Exports & Shipments
1969–0	474	3	71	548	14	181	215	6	417	37	—	37	454	34
1970–1	485	1	60	546	8	188	202	6	403	41	—	41	445	43
1971–2	499	—	58	557	1	190	203	10	403	35	1	36	439	49
1972–3	523	—	70	593	3	207	231	6	447	44	1	45	492	44
1973–4	528	1	57	586	6	198	198	2	404	45	1	46	450	68
1974–5	465	2	68	535	7	185	164	1	356	42	—	43	399	84
1975–6	644	1	52	697	4	212	297	1	514	44	1	45	559	98
1976–7	669	10	41	720	3	235	303	2	543	37	1	38	605	59
1977–8[1]	695	3	46	744	4	243	288	—	510	45	1	46	580	88
1978–9[2]	737	—	73	810		211	297						619	121
1979–0[2]	791	—	70	861		222	317						660	141
1980–1[2]	863	—	66	929		222	360						527	181
1981–2[2]		—	76											

[1] Preliminary. [2] Forecast. *Source: Economic Research Service, U.S.D.A.*

Crude Corn Oil Production in the United States In Millions of Pounds

Crop Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Total
1969–0	41.2	37.9	38.0	36.9	38.6	43.9	42.1	44.5	41.3	38.5	37.4	34.0	474
1970–1	42.0	40.1	34.7	38.0	37.3	43.7	41.4	41.0	42.7	42.4	40.1	42.0	405
1971–2	42.4	40.7	33.4	38.7	38.7	43.5	40.0	46.1	45.7	43.3	43.5	43.2	499
1972–3	44.1	40.3	40.1	42.6	41.7	46.3	40.6	47.5	45.9	45.8	44.3	43.8	523
1973–4	45.2	42.4	43.1	45.1	41.8	45.4	46.5	46.8	43.8	40.5	44.0	43.0	528
1974–5	41.2	40.1	40.1	37.0	34.6	38.6	37.6	40.6	38.9	40.5	35.2	40.3	465
1975–6	39.8	40.3	35.4	55.2	53.8	55.1	59.5	61.7	59.1	58.9	65.8	59.6	644
1976–7	62.0	50.4	51.3	48.1	49.0	59.2	55.6	58.1	57.9	64.0	59.3	53.7	668.6
1977–8	58.9	58.0	50.1	54.9	51.6	58.7	57.1	68.0	64.7	60.5	59.7	63.8	695.5
1978–9	65.4	59.8	55.8	47.6	54.9	69.4	67.4	69.7	60.6	61.5	63.9	60.3	736.3
1979–0[1]	61.8	63.3	63.0	62.3	60.0	70.7	64.3	68.3	65.1	66.2	69.9	76.2	791.1
1980–1[1]	80.6	68.0	59.0	65.8	63.6	76.2	69.6	74.3	76.1	76.2	76.4	77.8	863.6
1981–2[1]	81.4	69.2	66.5	56.7	64.9								
1982–3													

[1] Preliminary. *Source: Economic Research Service, U.S.D.A.*

Corn Oil Spot Price, Crude, F.O.B. Midwest Mills (Tank Cars) In Cents Per Pound

Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Average
1969–0	13.7	14.9	15.2	15.5	16.4	15.5	14.8	15.3	15.0	14.8	15.5	16.0	15.2
1970–1	17.8	19.5	21.5	22.5	27.5	21.0	17.0	18.8	19.5	19.3	18.9	17.8	20.1
1971–2	17.8	19.0	18.0	18.0	17.3	17.3	17.0	17.5	16.3	15.0	14.5	15.3	16.9
1972–3	16.0	15.8	16.5	17.8	17.3	17.8	17.5	19.0	21.0	20.8	35.0	23.0	19.8
1973–4	24.0	25.5	32.0	39.0	45.0	39.5	33.0	38.5	38.0	38.0	47.5	38.0	36.5
1974–5	45.0	45.0	42.0	44.0	40.5	39.0	37.0	27.0	26.5	29.5	31.0	28.0	36.2
1975–6	29.0	28.5	28.5	32.5	28.5	26.5	23.3	19.8	22.0	26.0	23.5	27.0	26.3
1976–7[1]	27.1	27.5	26.0	28.0	36.0	36.0	34.5	35.5	31.0	27.5	23.5	23.2	29.7
1977–8[1]	26.5	31.5	35.0	40.0	44.0	43.0	36.5	35.3	33.0	33.3	31.5	35.5	35.4
1978–9[1]	34.0	35.0	31.0	35.0	34.0	33.3	32.1	33.0	30.0	31.0	32.3	32.5	32.8
1979–0[1]	32.8	29.9	33.3	27.5	29.0	26.0	20.0	23.0	22.0	27.3	29.8	28.0	27.4
1980–1[1]	28.0	27.5	28.0	26.3	25.0	23.8	25.5	24.4	24.5	25.8	22.3	21.5	25.2
1981–2[1]	20.0	21.0	25.0	24.0	29.0								
1982–3													

[1] Preliminary. *Source: Economic Research Service, U.S.D.A.*

Cotton

The 1981 U.S. cotton crop totaled about 15.7 million bales (480 lbs. each), up 41 percent from the previous season's drought-reduced crop, and the largest production in 28 years. An estimated 13.8 million acres were harvested, of 14.3 million acres planted, resulting in an unusually low abandonment rate of less than 4 percent—the second lowest since 1960. Average yield of an estimated 546 pounds per harvested acre was 142 pounds above the previous season's yield, and only 1 pound less than the record high of 547 pounds per acre in 1979.

U.S. cotton production in 1981 represented about 22 percent of estimated world cotton production in the 1981/82 season, up from 17 percent in 1980 but the same percentage of total world output as in the 1979/80 season. World cotton production during 1981/82 was expected to reach a record 70.8 million bales, about 8 percent above the previous season's output. The sharply higher yield in the U.S. was primarily responsible for larger world production, because both U.S. and foreign harvested acreage rose only slightly. China harvested a crop of about 13.5 million bales in 1981, up 9 percent from the year earlier output and 32 percent above 1979 production. Soviet production was forecast at 13.8 million bales, down slightly from the previous season.

World cotton mill use during 1981/82 was estimated by the USDA in early March 1982 at 66.1 million bales, up from 65.3 million in the previous season. World imports of cotton were estimated at 20.3 million bales, down slightly from 20.5 million in 1980/81. World 1981/82 season ending stocks were estimated at 27.5 million bales, up from 23.1 million at the end of the previous season.

China was expected to account for about one-half of the anticipated modest gain in world cotton consumption during the 1981/82 season. China is the world's largest cotton consuming nation. Rising population, increased consumer sophistication, and the use of textile exports as an important source of foreign exchange are major reasons for the continued expansion in raw cotton use in China. Consumption in that country was estimated at 15.9 million bales in 1981/82 versus 15.4 million in the previous season and nearly 16 percent above consumption in 1979/80. Small consumption gains were expected for 1981/82 in Korea, Taiwan and Hong Kong, where combined mill use was estimated at 3.3 million bales, slightly above the 1980/81 level. Consumption of cotton in Japan during the 1981/82 season was expected to be about 125,000 bales below the 3.3 million bales consumed in the previous season because of continued depressed textile demand.

U.S. textile mills in 1981/82 were expected to consume only about 5.4 million bales of cotton, about 9 percent below the depressed level of the previous season. In December 1981, the daily consumption rate dropped to only 17,545 bales, the smallest daily consumption rate for any month since 1934. The continuing effects of large textile imports and recessionary pressures were the major factors contributing to the reduced level of cotton consumption, despite the relative price advantage which developed for cotton versus polyester during much of the season. In January 1981, mills paid 10 cents per pound more for cotton than for polyester. By the end of the 1980/81 season on July 31, 1981, cotton prices had declined to 2 cents per pound below polyester, and by January 1982, cotton had increased its relative price advantage over polyester to 16 cents per pound.

The U.S. net trade deficit for cotton textiles in 1981 was 595 million pounds, twice the year earlier level. It resulted from a 30 percent decrease in exports and a 19 percent increase in imports. The Multi-Fiber Arrangement (MFA) involving 50 countries was renewed, effective January 1, 1982 to July 31, 1986. The MFA sets guidelines for bilateral trade between various countries. One of the key elements is the ability of the U.S., in some cases, to limit imports from some of the textile supplying countries. The U.S. has 16 bilateral agreements which expire in 1982 and must be renegotiated.

U.S. cotton exports in 1981/82 were expected to represent about 33 percent of total world exports versus 30 percent in 1980/81 and 40 percent in 1979/80 when U.S. cotton exports reached a 50-year peak of 9.2 million bales. Japan was expected to provide the largest export market for U.S. cotton in 1981/82, followed by Korea and China.

World Production of Cotton In Thousands of Bales[3]

Year Begin. Aug. 1	Argentina	Brazil	China	Egypt	India	Iran	Mexico	Pakistan	Israel	Sudan	Colombia	Turkey	United States	U.S.S.R.	World Total
1970–1	390	2,740	9,200	2,346	4,400	710	1,440	2,502	163	1,130	540	1,845	10,269	10,800	54,396
1971–2	400	3,135	10,200	2,351	5,800	680	1,715	3,263	169	1,125	590	2,420	10,270	11,000	59,759
1972–3	575	3,000	9,800	2,369	5,370	965	1,780	3,237	186	920	630	2,505	13,890	11,100	63,272
1973–4	585	2,465	11,700	2,258	5,530	920	1,500	3,037	173	1,090	620	2,365	13,300	11,100	63,637
1974–5	790	2,440	11,500	2,018	5,950	1,095	2,230	2,925	230	1,015	700	2,760	11,525	12,250	64,713
1975–6	645	1,800	10,700	1,762	5,350	640	910	2,370	225	500	560	2,215	8,500	11,730	54,321
1976–7	740	2,510	10,000	1,828	4,950	720	1,045	2,006	247	735	685	2,190	10,650	12,050	57,487
1977–8	1,015	2,125	9,450	1,840	5,680	820	1,627	2,651	295	915	645	2,650	14,525	12,700	64,342
1978–9	800	2,530	10,000	2,022	6,220	610	1,570	2,183	365	640	375	2,200	10,885	12,000	59,810
1979–0	670	2,640	10,200	2,230	6,300	460	1,515	3,490	347	525	575	2,200	14,820	13,000	66,044
1980–1[1]	390	2,825	12,500	2,440	6,000	275	1,625	3,296	360	445	535	2,300	11,200	14,200	65,500
1981–2[2]	600	2,650	13,300	2,385	6,400	345	1,440	3,500	405	600	400	2,250	15,800	13,800	71,100
1982–3															

[1] Preliminary. [2] Estimate. [3] U.S. is in running bales (500 lbs.); all others are 478 pound net weight bales.
Source: International Cotton Advisory Committee

U.S. Government Activities

The established target price for calendar year 1981 was 70.87 cents per pound. Because the average price for 1981 was 63.2 cents, deficiency payments of 7.67 cents per pound were paid to eligible producers. These payments were based, in general, on 1981 planted acreage times the payment yield for each farm. The 1982 target price for all Upland cotton was set at 71 cents per pound, with a loan rate of 57.08 cents for SLM 1-1/16-inch cotton, 3.5 through 4.9 micronaire, at "average" U.S. location.

The 1982 U.S. Farm Program included a 15 percent acreage reduction program for 1982 crop Upland cotton. Cotton prices in the spring of 1982 were well below the 1982 target price, which provided substantial incentive for cotton producers to participate in the acreage reduction program. The program was voluntary, but only participating producers were eligible for CCC loans and target price protection.

Futures Markets

Cotton futures are actively traded on the New York Cotton Exchange, and a short staple contract was initiated on the New Orleans Commodities Exchange in 1981. The short staple futures contract in Hong Kong is inactive.

Supply and Distribution of All Cotton in the United States In Thousands of (480-Lb. Net Weight) Bales

Crop Year Beginning Aug. 1	Supply												Distribution		
	Carryover, Aug. 1						Ginnings								
	Privately Owned														
	At Mills	In Public Storage	Elsewhere	Total	CCC Held	Total Stocks	Current Crop[2] Less Ginnings	New Crop[3]	Total[4]	Imports	City Crop	Total	Mill Consumption	Exports	Total
1970–1	1,423	947	360	2,730	3,030	5,760	10,106	127	10,233	36	77	16,107	8,204	3,897	12,101
1971–2	1,641	1,908	400	3,949	303	4,252	10,107	40	10,147	72	81	14,552	8,259	3,385	11,644
1972–3	1,540	1,357	80	2,977	257	3,234	13,227	3	13,230	30	10	16,504	7,769	5,311	13,080
1973–4	1,500	1,881	350	3,731	198	3,929	12,608	145	12,753	48	20	16,750	7,472	6,123	13,595
1974–5	1,439	1,886	200	3,525	218	3,743	11,189	30	11,214	34	10	15,000	5,860	3,926	9,786
1975–6	1,132	4,074	275	4,511	970	5,481	8,151	47	8,198	92	5	13,776	7,250	3,311	10,561
1976–7	1,210	2,234	150	3,471	123	3,594	10,300	85	10,385	38	54	14,073	6,674	4,784	11,458
1977–8	1,089	1,850	–11	2,920	332	2,928	13,933	144	14,077	5	0	17,002	6,483	5,484	11,967
1978–9	1,120	3,806	400	4,057	1,269	5,326	10,405	72	10,477	4	0	15,807	6,352	6,180	12,532
1979–0[1]	927	2,605	250	3,145	637	3,782	14,190	200	14,390	5	0	18,177	6,506	9,229	15,735
1980–1[1]	955	1,822	250	2,485	542	3,027	10,627	44	10,671	28	1	13,898	5,891	5,926	11,817
1981–2[1]	883	1,687	25	1,943	652	2,595	15,150			22	12	17,850	5,556	7,015	12,571
1982–3															

[1] Preliminary. [2] Less ginnings prior to Aug. 1. [3] Ginnings prior to Aug. 1 end of season. [4] Includes inseason ginnings.
Source: Economic Research Service, U.S.D.A.

United States Cotton Ginnings

Crop Year	Ginnings to: (In Thousands of Running Bales)													
	Aug. 1	Aug. 16	Sept. 1	Sept. 16	Oct. 1	Oct. 15	Nov. 1	Nov. 14	Dec. 1	Dec. 15	Jan. 1	Jan. 16	Feb. 1	Total Crop
1970–1	6	70	280	519	1,135	2,609	4,163	6,470	8,830	9,786	—	10,037	—	10,112
1971–2	123	216	365	475	879	2,587	4,604	6,572	7,895	8,186	—	9,723	—	10,229
1972–3	40	N.A.	521	784	1,821	4,439	6,845	8,242	9,308	10,442	11,603	11,879	12,269	13,269
1973–4	3	N.A.	135	246	496	1,826	5,014	7,070	9,197	10,712	11,601	12,023	12,373	12,611
1974–5	145	N.A.	543	626	827	2,315	4,944	6,509	8,291	9,687	10,598	10,899	11,195	11,328
1975–6	30	N.A.	169	228	373	1,060	2,767	4,169	5,794	7,013	7,603	7,877	8,055	8,151
1976–7	47	N.A.	374	443	573	1,564	3,703	5,951	7,658	9,125	9,887	10,110	10,251	10,347
1977–8	85	N.A.	694	1,169	2,353	4,343	7,493	9,723	11,711	12,963	13,513	13,742	13,859	14,018
1978–9	144	N.A.	672	788	1,490	2,904	4,659	5,890	6,668	8,096	9,317	9,723	10,049	10,549
1979–0	72	N.A.	538	697	916	2,105	4,799	7,287	9,937	11,772	12,728	13,439	13,832	14,262
1980–1[1]	200	N.A.	581	745	1,312	2,566	4,599	6,698	7,840	8,808	9,873	10,430	10,676	10,826
1981–2[1]	44	N.A.	427	645	1,725	3,301	5,539	7,683	10,157	12,039	13,502	14,284	14,784	15,150
1982–3														

[1] Preliminary. *Source: Bureau of Census*

COTTON

Average Spot Cotton Prices,[2] C.I.F. Northern Europe In Cents Per Pound (Equivalent U.S. ¢/Lb.)

Crop Year (Aug.-July)	M 1"		SM 1 1/16"										SM 1 1/8"	
	U.S. Orleans/ Texas	Pakistan N.T. Sino	Guatemala	U.S. Memphis Terr. SM	Greece SM	Egypt Giza67 FG	Mexico SM	Nicaragua SM	Syria SM	U.S.S.R. Pervyi 8 1/32 MM	Iran	Izmir Turkey (12 MIR)	U.S. Calif.	Uganda BP52
1969	25.53	27.09		28.47			28.45	26.70	29.21	20.39	28.52	27.88	29.97	33.55
1970	27.46	29.60		29.68			30.71	28.45	29.26	32.47	29.20	28.35	31.32	33.15
1971	32.64	33.25		34.21			35.46	33.68	34.30	35.06	34.47	33.62	35.37	39.49
1972	34.66	32.63		36.55			37.52	35.34	37.82	37.01	37.66	37.05	37.44	39.89
1973	56.43	52.05		64.91	82.11		52.51	60.21	63.90	64.15	62.31	62.56	66.28	75.66
1974	58.91	51.52		66.69	58.66		66.16	61.06	74.06	66.71	67.60	69.54	68.17	79.84
1975	44.34	42.06		59.65	67.93		55.59	51.19	55.87	53.21	53.82	54.01	61.28	67.55
1976	77.74	N.Q.	79.14	79.88	87.24		79.26	77.12	78.15	78.11	78.50	77.68	78.98	91.73
1977	65.81	59.50	64.72	72.31	70.04		73.87	68.74	74.25	70.60	72.02	76.53	75.27	102.25
1978	63.23		75.23	72.52	83.09		72.94	70.21	72.08	72.55	75.10	73.46	77.99	N.Q.
1979–80	75.36	75.41	83.63	87.49	84.00	136.37	85.86	86.13	83.50	85.89	80.77	90.25	90.69	N.A.
1980–81[1]	89.14	84.94	93.47	101.23	101.00	137.41	94.91	92.46	101.00	92.80	N.Q.	96.65	101.85	
Aug. '81	73.62	77.62	80.19	82.25	—	138.22	80.38	79.19	—	81.69	N.Q.	84.12	85.62	
Sept. '81	69.94	72.12	75.00	77.62	—	138.26	77.00	74.00	—	77.81		82.00	80.56	
Oct. '81	68.50	65.70	72.55	75.80	83.10	138.20	75.70	71.65	—	74.55		79.60	79.50	
Nov. '81	65.56	64.88	69.55	72.94	81.06	107.80	74.75	68.75	81.88	70.58		72.94	75.19	
Dec. '81														
Jan. '82														
Feb. '82														

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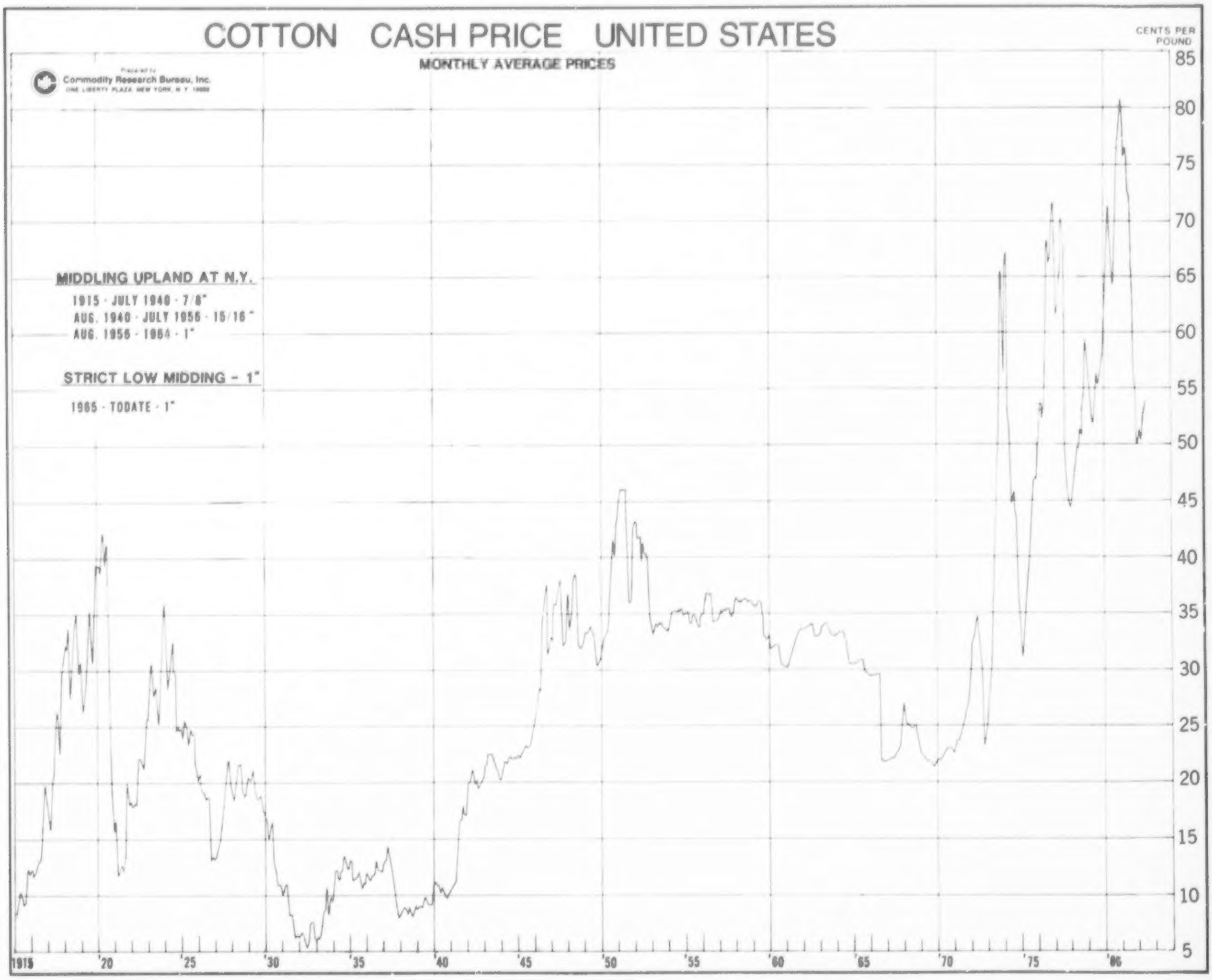
[1] Preliminary. [2] Generally for prompt shipment. *Source: Foreign Agricultural Service, U.S.D.A.*



World Consumption[3] of All Cottons in Specified Countries In Thousands of Bales (478 Pounds Net[2])

Yr. Beg. Aug. 1	Argentina	Brazil	China	East. Europe	France	W. Germany	India	Italy	Japan	Mexico	Pakistan	Un. Kingdom	United States	U.S.S.R.	World Total
1969–0	477	1,350	8,700	2,627	1,143	1,170	5,520	1,021	3,392	685	2,120	792	7,991	8,100	55,921
1970–1	492	1,380	9,300	2,707	1,095	1,078	5,200	925	3,541	675	1,985	741	8,068	8,400	56,230
1971–2	517	1,500	10,600	2,745	1,085	1,109	5,500	924	3,614	750	2,020	638	8,039	8,500	58,580
1972–3	472	1,700	11,300	2,755	1,064	1,074	5,700	862	3,724	800	2,485	650	7,800	8,500	60,358
1973–4	520	1,750	12,000	2,770	1,077	1,096	5,865	898	3,650	830	2,485	560	7,500	8,600	62,183
1974–5	515	1,900	11,800	2,700	932	962	5,785	828	2,900	820	2,020	510	5,885	8,700	58,602
1975–6	540	2,050	10,700	2,742	935	1,022	6,100	901	3,250	835	2,150	494	7,300	8,750	61,411
1976–7	540	2,100	11,400	2,752	961	966	5,500	923	3,150	760	1,800	491	6,702	8,750	60,866
1977–8	480	2,250	12,100	2,772	850	810	5,320	841	3,000	740	1,900	415	6,514	8,800	60,964
1978–9	505	2,450	12,900	2,805	825	780	5,650	979	3,300	760	1,950	449	6,374	8,900	63,447
1979–0	470	2,600	13,800	2,870	850	792	5,950	1,051	3,400	760	2,000	402	6,553	9,000	65,875
1980–1[1]	380	2,500	15,300	2,850	770	795	6,280	970	3,270	760	2,000	221	5,916	9,100	66,315
1981–2[4]	400	2,500	15,900	2,800	760	760	6,300	960	3,100	760	2,050	240	5,600	9,200	66,590
1982–3															

[1] Preliminary. [2] Except for the U.S. which are in running bales. [3] Includes estimates for hand spinning in some countries. Excludes cotton burned or otherwise destroyed. [4] Estimate. *Source: International Cotton Advisory Committee*

Cotton Government Loan Program in the United States

Crop Yr. Beginning Aug.	Acreage: Allotments	Acreage: Harvested	Loan Rate: Avg. at Spot[2] Mkts.	Loan Rate: Target Price	Stocks—Aug. 1: Gov't. Owned	Stocks—Aug. 1: Pooled	Stocks—Aug. 1: Loan	Total Stock	Loan Entries	Gov't. Purchases	Total Supply	Gov't. Cotton Released	Loan Cotton Repossessed	Total Distribution
	Thousand Acres		¢ Per Lb.		In Thousands of Running Bales									
1969–0	16,280	11,051	20.34	—	2,911	—	—	2,911	3,707	—	6,618	801	2,638	3,439
1970–1	17,228	11,155	20.37	—	3,035	—	—	3,035	2,411	—	5,446	2,734	2,399	5,133
1971–2	11,618	11,471	19.70	—	313	—	—	313	1,250	—	1,563	288	1,006	1,294
1972–3	11,618	12,984	19.71	—	25	—	244	269	1,945	—	2,214	24	2,006	2,030
1973–4	10,118	11,970	20.65	—	1	—	183	184	1,757	—	1,941	1	1,689	1,690
1974–5	11,118	12,547	27.06	38.00	—	—	251	251	2,465	—	2,716	0	1,677	1,677
1975–6	11,097	8,796	36.12	38.00	—	—	970	970	701	—	1,671	0	1,548	1,548
1976–7	11,084	10,914	38.92	43.20	—	—	123	123	952	—	1,075	—	743	743
1977–8	11,120	13,275	44.63	47.80	—	—	332	332	4,565	—	4,897	—	3,628	3,628
1978–9	10,340	12,400	48.00	52.00	—	—	1,268	1,268	1,559	—	2,828	—	2,191	2,191
1979–0	10,749	12,831	50.23	57.70	—	—	637	637	1,757	—	2,396	—	1,853	1,853
1980–1[1]	None	13,215	48.00	58.40	—	—	542	542	2,328	—	2,870	—	2,218	2,218
1981–2[3]	None	13,821	52.46	70.87	—	—	652	652	6,000	—	6,652	—	1,500	1,500
1982–3[3]	None		57.08	71.00										

Supply & Distribution of Gov't Controlled Cotton

[1] Preliminary. [2] Strict low middling, $1\frac{1}{16}''$ at 10 markets. [3] Estimate. [4] Early forfeitures. *Source: Department of Agriculture*

United States Government Crop Forecasts and Actual Cotton Crops

Year	Forecasts of Production (1,000 Bales of 480 Lbs.[1]): Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1	Actual Crop	Forecasts of Yields (In Lbs. Per Harv. Acre): Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1	Actual Yield
1969	11,779	11,088	10,528	10,036	10,080	9,990	504	474	450	429	436	434
1970	11,079	10,752	10,618	10,429	10,270	10,192	470	456	450	442	441	438
1971	10,932	10,952	10,701	10,719	10,548	10,477	452	453	443	444	442	438
1972	13,343	13,582	13,670	13,955	13,469	13,704	487	494	498	504	487	507
1973	12,740	12,939	13,123	13,189	12,961	12,974	493	502	509	512	519	520
1974	12,758	13,200	12,813	12,053	11,702	11,540	470	470	470	443	443	442
1975	9,416	9,309	9,059	9,034	8,476	8,302	484	479	467	466	437	453
1976	10,734	10,375	10,251	9,891	10,264	10,581	466	451	445	435	451	465
1977	13,535	13,302	13,317	13,832	14,496	14,389	506	495	500	503	525	520
1978	11,820	11,155	10,873	10,981	10,841	10,856	462	425	429	418	421	420
1979	13,710	14,245	14,356	14,544	14,527	14,629	497	525	528	535	534	547
1980	12,812	11,689	11,589	11,224	11,125	11,122	461	421	419	408	411	404
1981	14,789	15,507	15,476	15,560	15,733		515	540	540	543	546	
1982												

[1] Net Weight bales. Data prior to 1969 are in 500-lb. gross weight bales. *Source: Crop Reporting Board, U.S.D.A.*

Production of Cotton (Lint) & American-Pima in the United States

In Thousands of 480 Pound Net Weight Bales

Year	Alabama	Arizona	Arkansas	California	Georgia	Louisiana	Mississippi	Missouri	No. Car.	Oklahoma	So. Car.	Tennessee	Texas	New Mexico	Total Amer. Pima
	Uplands														
1969	460	595	1,137	1,312	282	482	1,319	325	99	279	205	421	2,831		77.4
1970	507	462	1,048	1,160	292	521	1,631	224	155	193	211	392	3,191		57.3
1971	640	466	[illegible]	1,117	374	600	1,693	401	135	177	275	528	2,579		98.1
1972	567	603	1,435	1,765	354	705	2,007	439	119	332	308	548	4,246		95.8
1973	448	611	1,041	1,749	390	521	1,816	180	164	427	290	432	4,673		78.1
1974	522	995	880	2,595	419	560	1,595	230	133	310	274	308	2,462	161	90.2
1975	312	572	687	1,954	148	346	1,040	196	46	170	98	222	2,382	72	54.5
1976	348	854	776	2,482	199	553	1,151	165	72	175	145	228	3,307	76	64.0
1977	277	1,070	1,025	2,790	82	656	1,645	235	53	436	109	255	5,465	173	112.2
1978	291	1,068	660	1,940	111	478	1,378	188	45	355	115	235	3,792	101	93.4
1979	324	1,280	606	3,408	152	690	1,437	157	43	522	116	171	5,515	104	98.6
1980	275	1,354	444	3,109	86	460	1,143	177	52	205	77	200	3,320	107	104.2
1981[1]	418	1,550	620	3,500	165	735	1,570	161	94	410	165	315	5,800	120	90.4
1982															

[1] Preliminary, December estimate. Source: Crop Reporting Board, U.S.D.A.

Aver. Spot Price of U.S. Cotton, 1 1/16 inches[1]—Strict Low Middling at Designated Markets

In Cents Per Pound

Yr. Begin. Aug. 1	Atlanta	Augusta	Charleston	Dallas	Fresno	Galveston	Greenville	Greenwood	Houston	Little Rock	Lubbock	Memphis	Montgomery	Phoenix	Average
1969–0	22.54	22.93	—	21.93	21.52	—	22.70	22.11	21.93	22.13	21.91	22.28	22.37	21.43	22.15
1970–1	23.84	24.25	—	23.29	22.91	—	24.02	23.68	23.40	23.63	23.28	23.78	23.83	22.72	23.55
1971–2	32.00	32.19	—	31.09	30.68	—	31.80	31.65	31.41	31.40	31.34	31.72	31.96	30.97	31.52
1972–3	35.04	35.02	—	31.31	32.19	—	33.38	33.37	31.38	33.75	32.40	32.45	35.30	32.33	33.14
1973–4[1]	68.63	68.63	—	63.75	71.54	—	68.06	68.06	64.57	—	61.87	68.01	68.44	66.26	67.10
1974–5	—	43.63	—	40.31	42.53	—	42.80	42.20	41.70	—	38.90	41.86	42.45	40.52	41.69
1975–6	—	60.22	—	55.84	58.72	—	59.19	58.54	57.65	—	55.06	58.48	58.93	57.20	57.99
1976–7	—	72.70	—	69.43	71.93	—	71.85	71.21	70.94	—	67.79	71.28	71.54	70.12	70.88
1977–8	—	53.81	—	50.53	56.67	—	53.33	52.75	51.58	—	50.04	52.75	53.24	52.71	52.74
1978–9	—	62.50	—	58.33	67.66	—	62.09	61.84	59.45	—	58.27	61.68	61.92	61.98	61.58
1979–0	—	73.92	—	68.91	73.76	—	73.24	72.73	—	—	66.43	72.55	72.57	71.98	71.48
1980–1	—	85.21	—	80.65	82.80	—	84.54	84.30	—	—	79.66	83.81	84.28	81.70	82.99
1981–2															

[1] Prior to 1973, prices are for 1 inch middling. *Source: Agricultural Marketing Service, U.S.D.A.*

Gross Entries of Cotton into U.S. Government Loan Program In Thousands of Running Bales

Crop Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April	May[1]	June[1]	July[1]	Seasonal Total
1969–0	39	74	475	1,084	936	893	140	40	17	7	2	[2]	3,707
1970–1	0	38	158	592	850	697	44	14	7	1	1	[2]	2,411
1971–2	37	13	38	336	285	388	124	23	1	1	2	[2]	1,250
1972–3	0	40	208	364	495	552	148	103	25	6	3	0	1,945
1973–4	0	15	137	479	589	380	96	40	12	5	4	0	1,757
1974–5	0	13	134	356	544	753	294	99	162	63	47	1	2,465
1975–6	0	1	8	80	195	298	94	15	6	5	[2]	0	701
1976–7	0	0	[2]	3	160	123	67	11	412	174	2	[2]	952
1977–8	[2]	31	214	802	1,531	1,544	310	72	30	13	18	[2]	4,564
1978–9	0	5	26	89	215	584	352	189	68	16	14	[2]	1,560
1979–0	0	[2]	23	294	319	600	316	110	51	35	8	[2]	1,759
1980–1	0	[2]	8	253	528	912	343	204	36	28	16	[2]	2,328
1981–2	0	9	132	293	1,081	2,796	1,120	473					
1982–3													

NOTE: Seasonal totals are net, due to allowances for rejections. [1] Entries after April 30 represent late reporting. [2] Less than one thousand bales. Sources: *N.Y. Cotton Exchange; Commodity Credit Corporation*

U.S. Upland Cotton—Ginnings, by Staple Length In Thousands of Bales

Crop Year	⅞" & Shorter	29/32"	15/16"	31/32"	1"	1 1/32"	1 1/16"	1 3/32"	1 ⅛"	1 5/32" & Longer	Total
1969–0	140.5	416.1	628.9	498.9	552.4	1,037.3	3,050.2	2,849.7	527.1	165.5	9,867
1970–1	37.1	350.1	1,045.8	588.1	524.4	1,016.4	3,771.7	2,001.7	612.1	107.9	10,055
1971–2	69.9	335.5	917.0	491.8	290.6	530.3	2,612.3	3,320.3	1,449.6	116.8	10,134
1972–3	11.6	156.8	802.0	1,187.7	1,145.6	1,318.4	4,694.0	2,859.1	913.9	84.5	13,174
1973–4	33.5	242.3	1,207.9	1,534.9	1,103.6	841.3	3,629.5	3,180.5	724.4	35.0	12,533
1974–5	12.3	70.3	424.0	683.8	594.4	531.7	2,543.3	4,965.9	1,316.3	97.8	11,240
1975–6	71.1	289.0	620.5	693.9	514.9	390.2	1,546.5	2,948.9	995.2	27.5	8,098
1976–7	9.2	77.4	570.3	980.2	889.7	1,060.4	2,525.5	2,952.8	1,179.9	38.7	10,284
1977–8	7.7	61.6	655.9	1,645.0	1,716.0	1,342.4	2,402.0	4,557.7	1,450.0	70.8	13,909
1978–9	9.4	89	432	877	1,335	1,090	2,497	3,113	1,017	57.8	10,459
1979–0	27.9	125.8	649.5	1,452.9	1,774.8	1,239.2	1,461.9	4,377.9	2,940.6	115.3	14,166
1980–1[1]	49.0	149.7	428.0	773.5	1,046.9	924.7	1,667.9	3,380.6	2,035.5	266.5	10,722
1981–2[2]	7.3	54.7	454.5	1,474.7	1,457.3	1,048.0	2,614.7	4,113.5	2,062.1	139.2	13,426
1982–3											

[1] Preliminary. [2] Thru Dec. 31. *Source: Consumer & Marketing Service, U.S.D.A.*

U.S. Daily Rate of Total Cotton Mill Consumption on Cotton-System Spinning Spindles[2] In Running Bales

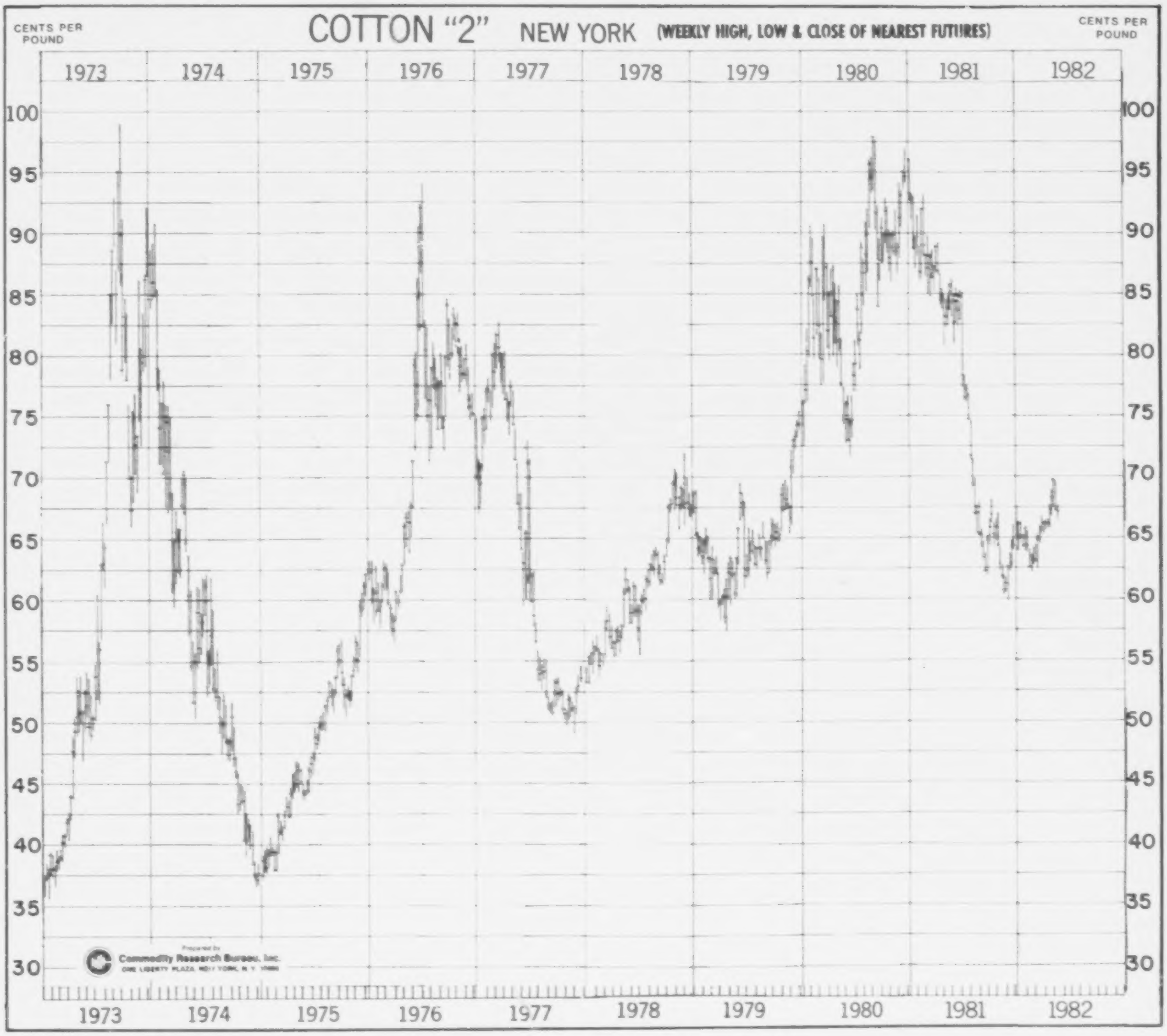
Crop Yr.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Average
1974–5	25,771	24,456	23,003	21,616	17,169	18,753	19,768	20,010	21,002	22,766	23,839	21,079	21,603
1975–6	25,273	26,569	27,325	27,481	24,977	28,478	29,937	28,478	27,110	27,592	27,668	22,230	26,926
1976–7	26,203	25,052	26,392	25,072	23,298	25,475	26,392	26,131	25,359	25,369	24,635	19,730	24,926
1977–8	24,687	24,230	25,590	25,235	22,476	24,629	25,042	24,790	24,213	24,173	22,984	19,169	23,935
1978–9	22,941	22,780	24,090	23,809	21,735	24,114	23,567	25,306	23,358	24,193	24,454	20,127	23,373
1979–0	23,617	24,177	25,188	24,099	21,813	24,160	25,353	25,654	24,899	24,781	23,883	18,473	28,610
1980–1[1]	22,130	22,816	23,884	22,885	19,000	21,773	22,312	21,544	21,741	22,060	21,260	19,250	26,066
1981–2[1]	21,448	20,679	22,420	20,138	15,985	18,898	20,185						
1982–3													

[1] Preliminary. [2] Not seasonally adjusted. *Source: Bureau of the Census; U.S.D.C.*

Average Wholesale Price of Cotton Yarn[1] (30/1[2], Combed, Knitting) on Cones In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1969	103.2	103.2	103.2	102.7	102.7	102.4	102.4	102.4	102.7	102.7	102.4	102.4	102.7
1970	102.1	102.1	101.4	100.8	100.8	100.5	100.1	100.1	100.1	100.3	100.5	101.1	100.8
1971	101.4	102.3	103.6	105.4	105.9	106.6	106.8	107.8	108.2	108.2	108.2	108.8	106.1
1972	109.6	110.7	110.7	111.5	112.1	112.3	112.3	112.1	111.7	110.7	110.3	110.5	110.5
1973[2]	85.4	86.4	88.9	91.0	97.2	100.0	98.8	106.2	108.2	108.8	112.5	116.8	100.0
1974	123.3	123.3	125.0	123.3	125.6	122.7	128.1	122.5	118.5	115.4	114.9	110.5	121.1
1975	106.3	102.9	101.4	101.4	102.7	103.9	105.1	106.3	112.5	117.1	120.5	122.0	108.5
1976	127.2	128.4	128.9	128.4	132.3	139.4	145.8	149.0	148.7	147.5	148.7	147.5	139.3
1977	145.1	144.3	146.3	147.5	148.7	147.3	146.5	142.6	156.5	153.9	153.2	153.9	148.8
1978	153.2	155.2	157.5	158.1	160.1	162.7	163.7	163.7	163.7	165.0	165.0	165.6	161.1
1979	165.6	166.3	165.6	165.6	165.9	166.9	166.9	167.3	167.9	169.9	172.8	176.3	168.1
1980	180.6	198.3	200.0	203.0	204.6	202.7	203.3	206.3	206.3	207.6	210.6	211.6	202.9
1981	212.9	214.6	214.6	212.6	211.9	211.9	210.3	207.0	203.0	199.0	196.7	192.1	207.2
1982	191.4	191.7	191.1										

[1] Natural stock, f.o.b. mill. [2] Data prior to 1973 are for 36/2. *Source: Bureau of Labor Statistics* (0326-0101.05)



Month End Open Interest of Cotton Futures at New York In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	27,493	25,289	29,942	29,780	37,143	31,736	30,252	33,901	33,574	37,272	35,537	37,283
1979	35,702	37,809	39,058	35,174	37,391	41,908	33,897	39,343	34,326	41,717	39,684	43,981
1980	54,046	57,891	44,363	38,596	31,753	27,276	39,711	46,814	49,370	45,433	40,208	38,022
1981	32,078	34,782	25,882	24,108	26,793	27,286	26,009	30,014	32,121	31,671	29,157	28,584
1982	30,296	31,740	30,230	31,422								

Source: N.Y. Cotton Exchange

Volume of Trading of Cotton Futures at New York In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	75,314	76,546	92,494	75,240	96,764	117,272	64,924	98,652	94,758	120,670	146,217	96,250	1,155,101
1979	118,361	142,088	139,547	122,110	131,245	191,763	102,928	115,842	114,684	135,924	207,659	159,349	1,689,051
1980	286,058	278,901	290,133	206,682	191,067	128,393	175,619	188,542	224,323	186,615	173,981	173,133	2,523,447
1981	156,303	166,292	150,297	117,653	90,157	117,249	99,175	95,312	96,956	120,301	115,833	89,985	1,415,213
1982	100,242	104,444	103,697	106,892									

Source: N.Y. Cotton Exchange

High, Low & Closing Prices of May Cotton Futures at New York In Cents per Pound

Year of Delivery		Year Prior to Delivery										Delivery Year				Life of Delivery Range
		Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	
1978	High	72.60	71.30	70.00	66.90	64.75	57.25	56.15	55.35	53.70	55.33	57.60	58.19	59.50	57.88	58.70	72.60
	Low	69.75	66.27	66.00	60.20	57.50	54.60	53.50	52.30	51.28	51.41	54.25	55.10	56.00	55.35	56.75	51.28
	Close	70.60	69.30	66.25	60.75	57.60	56.25	54.70	52.80	52.52	54.41	56.82	56.98	56.07	57.00	58.70	—
1979	High	63.40	63.65	67.15	66.50	66.22	69.00	69.20	75.70	75.05	73.85	70.90	68.15	64.45	61.70	62.95	75.70
	Low	61.00	61.50	63.20	63.00	63.00	65.35	66.85	68.80	70.72	68.65	65.50	63.90	59.20	57.50	59.45	54.95
	Close	62.35	63.35	65.25	64.90	66.35	68.35	69.00	73.85	73.67	69.66	65.82	64.17	59.67	61.50	60.47	—
1980	High	67.90	65.70	66.40	68.25	67.00	70.00	69.00	68.90	73.00	76.40	86.00	90.42	90.70	87.40	84.40	90.70
	Low	66.00	64.10	63.00	63.90	64.55	65.90	66.25	66.40	68.20	70.82	73.97	80.70	77.52	79.50	80.90	64.15
	Close	65.65	65.45	64.15	65.60	66.05	69.20	67.70	68.22	71.77	75.95	85.37	86.77	85.12	81.99	83.75	—
1981	High	80.60	77.60	78.42	75.00	85.70	94.50	96.87	93.50	93.12	97.67	96.50	93.70	89.80	89.20	85.20	97.67
	Low	74.50	74.30	74.92	72.80	75.50	81.65	87.00	88.20	86.70	88.40	88.35	86.00	84.75	83.75	80.65	71.00
	Close	77.00	75.05	75.00	74.80	84.80	93.92	90.40	90.20	92.08	95.60	90.90	90.14	86.12	84.00	80.45	—
1982	High	84.90	85.35	83.66	82.50	81.27	79.40	73.80	71.90	70.45	67.40	67.95	67.65	66.75	68.95		
	Low	82.75	83.20	81.80	78.70	79.10	71.45	68.55	68.30	64.40	63.11	65.55	64.65	64.01	65.40		
	Close	84.20	83.26	82.90	79.00	79.30	69.15	69.15	69.45	65.29	65.70	67.82	64.94	65.92	68.30		
1983	High	74.65	76.75														
	Low	73.50	74.20														
	Close	74.53	76.40														

Source: N.Y. Cotton Exchange

Exports of American Cotton from the United States In Thousands of Running Bales

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Total
1969–0	147	141	167	123	176	382	325	246	308	299	269	186	2,768
1970–1	84	89	180	252	362	441	455	562	467	327	307	214	3,740
1971–2	162	310	195	272	417	337	402	437	275	163	147	110	3,227
1972–3	59	82	191	352	534	654	528	676	608	437	500	388	5,009
1973–4	329	266	259	257	592	545	598	778	638	561	496	426	5,745
1974–5	261	125	121	272	350	409	380	346	371	364	392	356	3,746
1975–6	325	258	226	176	237	214	141	381	302	327	315	276	3,176
1976–7	274	342	217	265	376	354	509	536	548	400	462	282	4,564
1977–8	181	200	149	333	496	521	502	704	640	510	528	456	5,218
1978–9	524	388	283	355	464	517	577	574	603	542	614	410	5,850
1979–0[1]	463	428	390	630	902	737	1,025	1,150	914	911	686	540	8,776
1980–1[1]	402	393	237	436	541	669	2,352	733	498	458	320	264	7,303
1981–2[1]	990	261	261	478	737	653							

[1] Preliminary. *Source: Foreign Agricultural Service, U.S.D.A.*

Exports of Cotton Cloth from the U.S. to Countries of Destination In Millions of Square Yards

Year	Argentina	Canada	Central America	Other Asia	Colombia	Cuba	Other Countries	Haiti	Indonesia	Philippines	Rep. of So. Africa	Un. Kingdom	Total Exports
1968	.1	113.2	13.4		.1	0		1.5	1.7	13.3	8.5	5.0	273.1
1969	.3	128.6	14.5		.2	0		1.3	.5	12.5	7.1	5.2	299.7
1970	.3	106.9	14.0		.4	0		1.6	.6	6.6	6.1	7.7	266.6
1971	.2	136.6	9.3		.2	0		1.9	1.1	4.1	5.7	9.4	301.0
1972	[2]	149.7	12.1		.5	0	187.2	2.7	.6	3.0	7.5	15.4	378.7
1973	[2]	152.6	12.1		[2]	[2]	240.2	1.1	1.1	3.9	11.8	20.4	443.2
1974	[2]	163.4	11.4		[2]	0	272.3	1.0	.7	6.2	13.4	33.5	501.9
1975	[2]	136.2	5.5		[2]	0	265.0	1.0	.2	5.3	8.2	33.3	454.7
1976	[2]	155.7	7.3		.2	0	306.0	2.0	[2]	10.0	6.7	39.7	527.6
1977	.2	144.4	15.2		.4	2.8	229.7	2.2	[2]	6.6	4.1	37.4	443.0
1978[1]	1.3	187.9	6.0		.1	0	158.5	1.9	[2]	7.0	7.0	12.9	382.6
1979													

[1] Preliminary. [2] Less than 50,000 square yards. *Source: Bureau of the Census*

COTTON

Avg. Price[1] Received by Farmers for Upland Cotton in the U.S. In Cents Per Pound

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb	Mar.	Apr.	May	June	July	Average[1]
1969–0	20.51	19.39	21.70	21.36	19.95	19.09	20.73	21.14	21.61	22.12	22.14	22.47	20.94
1970–1	22.65	21.86	22.77	22.09	20.92	21.11	21.76	22.51	23.09	22.92	23.11	22.78	21.86
1971–2[2]	26.00	26.12	27.04	27.95	28.37	29.45	30.16	27.60	30.75	31.71	31.29	30.86	28.07
1972–3	30.67	26.69	26.67	27.45	25.21	22.39	22.78	26.38	27.06	30.25	29.52	30.38	27.30
1973–4	37.46	38.20	38.00	39.50	47.60	50.60	52.00	53.40	54.9	49.2	51.5	49.4	44.4
1974–5	53.6	54.9	51.4	50.4	43.8	37.0	32.6	33.5	35.4	36.5	38.9	40.6	42.7
1975–6	43.5	47.2	49.9	49.7	49.6	50.5	51.7	52.7	53.9	57.5	66.9	68.8	51.1
1976–7	59.7	62.4	63.2	65.9	63.7	62.7	64.8	70.1	68.3	66.8	59.8	61.7	63.8
1977–8	58.3	59.1	53.6	52.1	48.7	49.1	51.4	51.1	52.2	53.7	54.8	56.5	52.1
1978–9	57.4	56.2	59.6	61.1	59.0	57.0	55.6	53.5	54.7	56.0	58.8	61.9	58.1
1979–0	59.2	57.3	61.3	61.0	59.9	61.6	66.5	64.8	63.3	66.8	62.8	74.9	63.1
1980–1	80.1	81.4	75.3	77.6	80.9	76.6	70.8	71.9	72.7	72.3	71.1	70.2	76.1
1981–2	65.0	58.0	62.3	60.1	51.2	49.9	48.4	50.1	50.3				
1982–3													

[1] Weighted average by sales. [2] Beginning Aug. 1971 basis for cotton prices was changed from 500 pound gross weight to a 480 pound net weight bale. *Source: Crop Reporting Board, U.S.D.A.*

Consumption of American and Foreign Cotton in the United States In Thousands of Bales[1]

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Total
1969–0	629	634	810	646	717	635	626	780	616	609	730	532	7,965
1970–1	593	760	632	641	722	644	665	815	637	646	797	515	8,068
1971–2	637	771	633	642	727	632	649	808	620	627	772	493	8,010
1972–3	587	715	593	739	544	747	597	601	719	579	575	573	7,569
1973–4	567	543	706	564	509	712	592	587	679	563	546	582	7,150
1974–5	515	489	575	432	343	469	395	400	525	455	477	527	5,602
1975–6	505	531	683	550	624	570	559	712	542	552	692	445	6,965
1976–7	524	626	528	501	582	510	528	653	507	507	616	395	6,477
1977–8	494	606	512	505	562	493	501	620	484	483	575	383	6,218
1978–9[2]	459	569	482	595	435	603	468	506	584	484	489	503	6,177
1979–0[2]	472	482	630	482	436	604	507	513	622	496	478	487	6,209
1980–1[2]	443	456	597	458	475	435	446	539	435	441	531	385	5,641
1981–2[2]	429	517	448	403	400	378	404						
1982–3													

[1] American cotton, running bales; foreign cotton, equivalent 500 lb. bales. [2] Preliminary. *Source: Bureau of the Census*

Exports of American Cotton from the United States to Countries of Destination In Thousands of Running Bales

Yr. Beg. Aug. 1	Bangladesh	Canada	Hong Kong	France	W. Germany	India	Italy	Japan	Netherlands	Spain	Sweden	United Kingdom	Rep. of Korea	China	Taiwan	World Total
1969–0	—	181	61	30	26	261	47	623	19	4	37	38	455	0	193	2,768
1970–1	—	292	193	60	65	210	57	841	34	19	29	95	491	0	407	3,737
1971–2	—	312	48	35	77	101	121	726	30	38	11	63	489	0	288	3,229
1972–3	122	249	193	141	177	—	172	1,039	46	107	33	87	572	0	356	5,007
1973–4	98	258	356	81	101	0	124	1,312	17	35	40	57	722	0	542	5,746
1974–5[1]	51	186	73	65	52	0	97	957	19	58	34	33	628	0	384	3,746
1975–6[1]	142	131	126	23	11	—	53	646	3	17	21	10	893	0	498	3,178
1976–7[1]	122	187	358	45	36	273	85	973	12	86	17	66	913	0	436	4,565
1977–8[1]	42	214	479	80	65	1	77	1,028	21	64	21	59	1,172	414	490	5,219
1978–9[1]	107	214	402	61	92	1	138	1,276	17	62	22	68	1,209	606	431	5,850
1979–0[1]		263	601	88	195	0	176	1,513	11	124	20	68	1,412	2,156	693	8,779
1980–1[1]		258	195	40	107	—	52	1,088	1	57	10	36	1,233	1,309	344	5,639
1981–2																

[1] Preliminary. *Source: Bureau of the Census*

Average Spot Price of Strict Low Middling,[1] $1\frac{1}{16}''$[2], Cotton at Designated U.S. Markets ¢/Lb. (Net Weight)

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Average
1969–0	21.59	21.42	21.68	21.94	22.02	22.00	22.11	22.19	22.44	22.60	22.78	22.96	22.15
1970–1	22.99	22.98	23.00	22.82	22.58	22.81	23.22	23.56	23.79	24.46	25.07	25.31	23.55
1971–2[1]	25.99	26.52	27.03	27.41	29.55	32.35	32.82	33.14	34.30	34.75	33.43	32.13	30.78
1972–3	30.22	25.60	23.26	23.85	25.72	28.05	29.38	30.89	35.31	39.23	39.47	44.06	31.25
1973–4	53.03	65.46	63.24	56.36	65.68	67.11	57.87	53.26	51.52	45.94	44.87	45.92	55.86
1974–5[2]	50.36	47.65	44.59	39.96	36.91	36.10	36.44	37.81	40.43	41.73	42.77	45.57	41.69
1975–6	48.40	50.74	50.38	50.87	55.12	57.17	56.96	55.47	57.18	62.07	72.74	78.73	57.99
1976–7	73.25	72.26	76.98	76.53	73.10	66.95	72.15	75.75	73.67	70.65	61.08	58.18	70.88
1977–8	52.54	49.30	49.06	47.98	48.42	51.05	52.89	55.01	54.72	57.59	57.35	56.99	52.74
1978–9	59.78	60.04	64.08	65.65	64.39	61.48	60.59	58.70	58.05	60.90	63.38	61.87	61.58
1979–0	62.08	62.15	62.88	63.40	66.20	72.40	80.66	79.24	79.05	78.27	72.41	79.01	71.48
1980–1	85.60	87.51	85.78	87.05	87.23	85.11	83.30	81.52	81.15	78.46	78.12	75.08	82.99
1981–2	66.44	60.81	60.63	57.47	55.11	57.82							

[1] Prior to Aug. 1971 prices are for MIDDLING. [2] Prices prior to 1974–75 are for 1″ cotton. *Source: Department of Agriculture*

Average Spot Cotton, $1\frac{3}{32}''$, Price at Designated U.S. Markets In Cents Per Pound (Net Weight)

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Average	$1\frac{1}{32}''$	1″
1970–1	25.94	25.68	25.41	25.10	24.86	25.08	25.45	25.90	26.21	26.76	27.36	27.58	25.94	24.59	24.53
1971–2[1]	28.05	28.54	29.05	29.47	31.38	34.04	34.49	34.98	37.01	38.46	36.95	35.38	33.15	31.96	31.51
1972–3	33.29	28.10	25.83	27.32	29.50	32.47	33.33	35.23	40.43	45.34	46.27	52.28	35.78	33.66	33.14
1973–4	67.14	80.71	75.50	66.91	76.82	78.28	68.76	62.58	63.59	56.48	55.40	55.50	67.31	64.59	57.66
1974–5	50.58	47.87	44.81	40.18	37.11	36.30	36.64	38.01	40.60	41.90	42.94	45.74	41.89	40.02	39.08
1975–6	48.57	50.91	50.55	51.07	55.32	57.37	57.16	55.67	57.38	62.27	72.94	78.93	58.18	56.44	54.69
1976–7	73.45	72.46	77.18	76.73	73.30	67.15	72.36	75.96	73.88	70.85	61.26	68.36	71.08	69.34	67.09
1977–8	52.72	49.48	49.24	48.16	48.65	51.28	53.12	55.24	54.95	57.82	57.58	57.22	52.96	51.27	48.26
1978–9	60.01	60.27	64.31	65.94	64.68	61.77	60.88	59.03	58.44	61.30	63.79	62.26	61.89	59.92	55.24
1979–0	62.47	62.54	63.28	63.81	66.58	72.78	81.05	79.63	79.44	78.66	72.80	79.40	71.87	69.53	63.39
1980–1	86.00	87.91	86.18	87.45	87.63	85.57	83.70	81.92	81.55	78.86	78.52	75.48	83.39	80.95	75.70
1981–2	66.84	61.22	61.08	57.91	55.52	58.24									

[1] Beginning Aug. 1971 prices are for STRICT LOW MIDDLING. *Source: Agricultural Marketing Service, U.S.D.A.*

Cotton Cloth[1] Production in the United States In Millions of Linear Yards

Year	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total Year	Year	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total Year
1969	1,824	1,810	1,608	1,723	6,968	1976	1,268	1,221	1,099	1,129	4,718
1970	1,656	1,561	1,468	1,562	6,246	1977	1,207	1,145	982	1,023	4,356
1971	1,607	1,608	1,405	1,527	6,149	1978	1,056	1,019	912	1,020	4,007
1972	1,530	1,475	1,277	1,384	5,616	1979[2]	1,033	1,018	931	927	3,858
1973	1,377	1,324	1,160	1,226	5,086	1980[2]	1,032	968	996	1,062	3,729
1974	1,322	1,279	1,127	985	4,714	1981[2]	971	971	953	993	3,888
1975	902	978	1,051	1,164	4,095	1982					

[1] Cotton broadwoven goods over 12 inches in width. [2] Preliminary. *Source: Bureau of the Census*

U.S. Exports of Cotton Cloth (Raw Cotton Equivalent) In Thousands of Bales (Net Weight—480 Lbs.)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1970	28.2	23.1	29.1	28.0	25.0	21.2	19.3	16.5	18.6	23.0	22.7	19.7	274.3
1971	20.3	20.5	25.9	25.4	26.3	23.5	24.4	28.1	36.3	13.0	23.7	45.3	312.6
1972	33.8	31.6	37.7	32.2	33.8	35.8	29.7	34.2	31.3	39.0	34.0	36.0	409.2
1973	32.3	30.2	38.3	38.0	38.8	37.9	35.4	33.9	42.5	43.8	44.8	43.3	459.4
1974	44.1	43.6	52.9	51.0	51.5	51.2	44.2	36.7	39.3	41.4	39.4	36.2	531.5
1975	36.9	36.0	43.8	43.8	37.5	37.5	34.3	38.1	41.0	49.8	41.6	39.9	488.3
1976	42.8	41.6	54.6	48.0	41.1	47.8	39.0	39.0	45.8	57.5	45.6	53.2	556.0
1977	42.8	51.6	47.1	47.2	36.9	36.5	29.4	31.0	40.2	24.8	26.3	46.3	460.1
1978	32.2	35.2	37.1	35.2	34.5	33.0	31.4	35.9	37.9	44.8	50.1	50.4	457.9
1979[1]	45.6	45.4	56.7	44.1	50.5	57.0	46.2	47.1	55.8	59.0	62.3	58.1	627.7
1980[1]	50.6	54.2	52.4	45.2	42.4	47.2	34.6	44.3	48.0	42.0	38.4	40.9	540.2
1981[1]	34.8	28.2	35.8	35.7	30.9	30.8	21.7	25.9	25.8	27.5	26.6	21.9	345.6

[1] Preliminary. *Source: Bureau of the Census*

Cottonseed and Cottonseed Products

U.S. cottonseed production for the 1981/82 season ending July 31, 1982 was estimated at 6.3 million tons, versus 4.5 million in the previous season. Thus, despite beginning stocks of only 0.4 million tons, total supplies for the 1981/82 season were expected to be a record-high 6.7 million tons.

The 1981/82 cottonseed crush was estimated by the USDA at 4.2 million tons, very slightly below the 1980/81 level. A crush of this size should produce close to 1.4 billion pounds of oil and 2 million tons of meal.

U.S. exports of cottonseed in the 1981/82 season were expected to decrease sharply, to around 50 thousand tons, compared with 133 thousand in 1980/81. The primary reason for the larger 1980/81 exports was the agreement signed December 3, 1980 between the U.S. and Mexico, which provided for Mexican purchases of 100 to 180 thousand tons of U.S. cottonseed in calendar 1981. But, lower cottonseed use in 1981/82 was expected to result in increased stocks. Total ending U.S. stocks of cottonseed on July 31, 1982 were projected at a record 1.3 million tons.

Cottonseed oil supplies for 1981/82 were expected to total near 1.4 billion pounds, unchanged from the previous season's level. Estimated disappearance was again expected to be split evenly between domestic use and exports, and at nearly 1.4 billion pounds, also about unchanged from 1980/81. Egypt and Venezuela are major importers.

Cottonseed meal use was expected to decrease slightly in 1981/82. Producers were expected to reduce output in 1981/82. Nevertheless, in the face of these declines, possible lower meal prices may provide some incentive to increase feeding rates.

World Production of Cottonseed In Thousands of Metric Tons

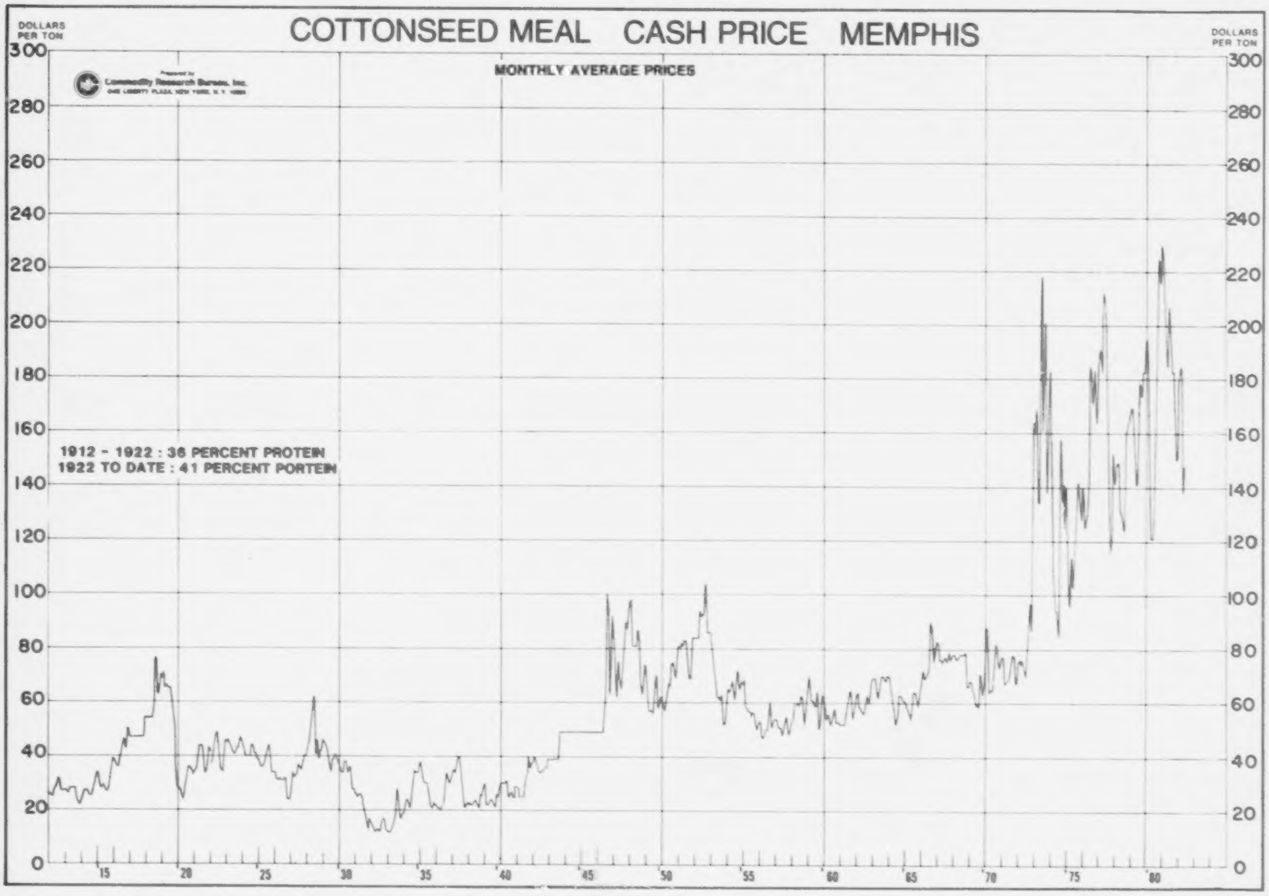
Crop Year	Sudan	Argentina	Brazil	China[2]	Egypt	India	Mexico	Pakistan	Peru	Turkey	Africa South	U.S.S.R.	United States	World Total
1969–0	455	294	1,347	3,130	921	2,160	762	1,093	161	640		3,635	3,690	21,517
1970–1	472	170	994	3,300	884	1,920	631	1,105	165	640		4,365	3,690	21,324
1971–2	443	183	1,370	3,215	899	2,575	745	1,436	152	835		4,405	3,846	23,438
1972–3	351	254	1,304	2,750	895	2,247	779	1,425	135	870		4,525	4,892	23,998
1973–4	432	248	1,171	4,355	862	2,400	640	1,264	173	821		4,767	4,550	25,330
1974–5	395	349	1,034	4,185	760	2,618	989	1,285	150	956		5,212	4,091	25,745
1975–6	200	270	802	4,185	800	2,444	453	1,259	131	736		4,686	2,749	23,738
1976–7	300	364	984			2,138				768		4,888	3,764	
1977–8	357	414	844	4,100	690	2,500	590	1,151	138	920		4,693	5,009	25,004
1978–9	249	330	1,013	4,334	736	2,800	575	920	150	760	105	4,804	3,873	23,909
1979–0	215	315	986	4,414	792	2,643	560	1,436	160	750	128	4,510	5,242	24,990
1980–1[1]	264	210	1,135	5,414	896	2,700	570	1,422	160	758	121	5,082	4,056	25,613
1981–2[3]				5,880		2,800		1,470				5,000	5.673	27,545
1982–3														

[1] Preliminary. [2] Including Manchuria. [3] Estimated. *Source: Foreign Agricultural Service, U.S.D.A.*

Salient Statistics of Cottonseed in the United States

		In Thousands of Short Tons				Products Produced — In Million Pounds					Yield Per Ton Crushed — In Pounds				
Year Begin Aug.	Farm Value of Production Mil. $	Exports	Seed for Planting	Residual[2]	Crushings	Oil	Meal	Linters[5]	Hulls	Other[3]	Oil	Meal	Linters	Hulls	Total Value of Pdt's. $ Per Ton
1969–0	167.3	23	158	41	3,925	1,282	3,670	1,234	1,810	344	327	935	189	461	86.34
1970–1	229.6	39	163	—	3,728	1,211	3,458	1,147	1,744	320	325	927	194	468	94.68
1971–2	240.9	3	189	70	3,960	1,275	3,588	1,145	1,956	379	322	906	182	494	89.79
1972–3	267.1	10	173	57	4,880	1,535	4,448	1,341	2,430	502	314	911	173	498	121.14
1973–4	501.2	49	198	6	4,792	1,551	4,354	1,341	2,346		324	908	175	489	186.76
1974–5	611.2	6	128	74	4,226	1,347	3,770	1,269	2,144		319	892	190	507	189.19
1975–6	312.3	61	190	367	2,952	986	2,476	847	1,546		334	891	181	523	171.66
1976–7	425.4	26	181	333	3,499	1,141	3,286	983	1,832		326	898	177	524	189.04
1977–8	388.0	41	175	454	4,313	1,386	4,166	1,174	2,152		322	918	172	500	160.89
1978–9	485.6	16	175	247	4,127	1,328	3,770	1,077	2,068						221.00
1979–0[1]	697.6	94	196	725	4,230	1,423	4,098								194.65
1980–1[4]	573.9	133	—700—		4,076	1,194	3,580								
1981–2[4]	551.4	50			4,200	1,345	3,864								
1982–3															

[1] Preliminary. [2] Mainly used on farms for feed & fertilizer. [3] Including loss; and also motes, grabbots & hullfibers. [4] Forecast. [5] In THOUSANDS OF RUNNING BALES. *Source: Economic Research Service, U.S.D.A.*



Average Wholesale Price of Cottonseed Meal (41% Protein-Expeller) at Memphis In Dollars Per Ton

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1969	68.40	64.60	62.50	61.70	59.10	59.60	58.00	71.00	67.80	63.40	67.75	78.50	66.00
1970	88.10	74.50	64.40	64.90	65.20	70.20	78.30	82.00	74.50	72.60	75.90	76.70	73.80
1971	77.40	73.60	66.80	68.20	68.80	71.30	74.60	78.00	76.50	66.80	67.80	74.80	72.05
1972	75.70	74.40	75.60	73.60	72.25	70.30	81.40	86.60	96.50	86.60	118.90	164.40	89.69
1973	160.30	168.75	134.75	134.20	207.80	217.50	161.20	201.25	178.75	138.00	160.60	182.50	170.47
1974	159.50	119.40	109.30	93.60	94.25	85.00	133.50	157.50	135.00	141.25	125.00	140.00	124.44
1975	121.60	100.50	95.90	114.00	105.60	116.40	123.25	131.70	141.50	131.60	127.50	139.50	119.93
1976	136.25	125.00	127.50	130.00	143.75	182.30	184.75	170.70	184.40	163.50	171.00	185.60	158.73
1977	190.00	190.60	184.50	204.40	211.90	200.00	163.10	129.00	116.25	121.25	152.60	141.25	167.07
1978	148.00	148.60	149.40	131.25	130.00	127.50	124.40	149.00	162.00	164.00	166.25	167.50	147.33
1979	169.50	161.90	156.90	141.25	143.00	171.00	178.50	173.75	183.10	183.00	183.75	195.00	170.06
1980	167.00	156.25	136.25	120.50	121.00	129.40	157.00	198.40	224.50	215.60	230.00	224.00	173.33
1981	205.60	178.75	185.00	206.90	201.75	190.00	182.50	183.10	166.50	150.00	150.60	179.00	181.64
1982	184.70	159.40	138.00										

Source: Economic Research Service, U.S.D.A.

COTTONSEED AND COTTONSEED PRODUCTS

Cottonseed Crushed (Consumption) in the United States In Thousands of Short Tons

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Total
1969–0	119	161	479	501	506	497	453	422	308	220	160	100	3,925
1970–1	84	98	417	477	471	463	439	410	311	238	186	134	3,728
1971–2	139	109	349	458	484	474	425	481	344	298	228	169	3,960
1972–3	196	175	444	529	499	528	480	522	450	426	342	290	4,880
1973–4	275	185	370	532	465	549	463	499	443	424	320	268	4,792
1974–5	235	202	385	431	441	471	434	453	356	331	261	225	4,226
1975–6	225	158	219	291	324	366	336	295	241	203	169	125	2,952
1976–7	115	91	262	403	416	422	414	407	278	266	230	194	3,499
1977–8	187	186	370	459	431	443	403	449	378	341	346	321	4,313
1978–9	312	254	348	423	392	418	404	426	355	325	255	217	4,129
1979–0[1]	258	175	304	394	379	442	388	454	374	388	359	315	4,230
1980–1[1]	330	306	365	426	400	440	378	372	314	278	248	218	4,076
1981–2[1]	196	191	340	428	488	479	450						

[1] Preliminary. *Source: Bureau of Census*

Production of Cottonseed Cake and Meal in the United States In Thousands of Short Tons

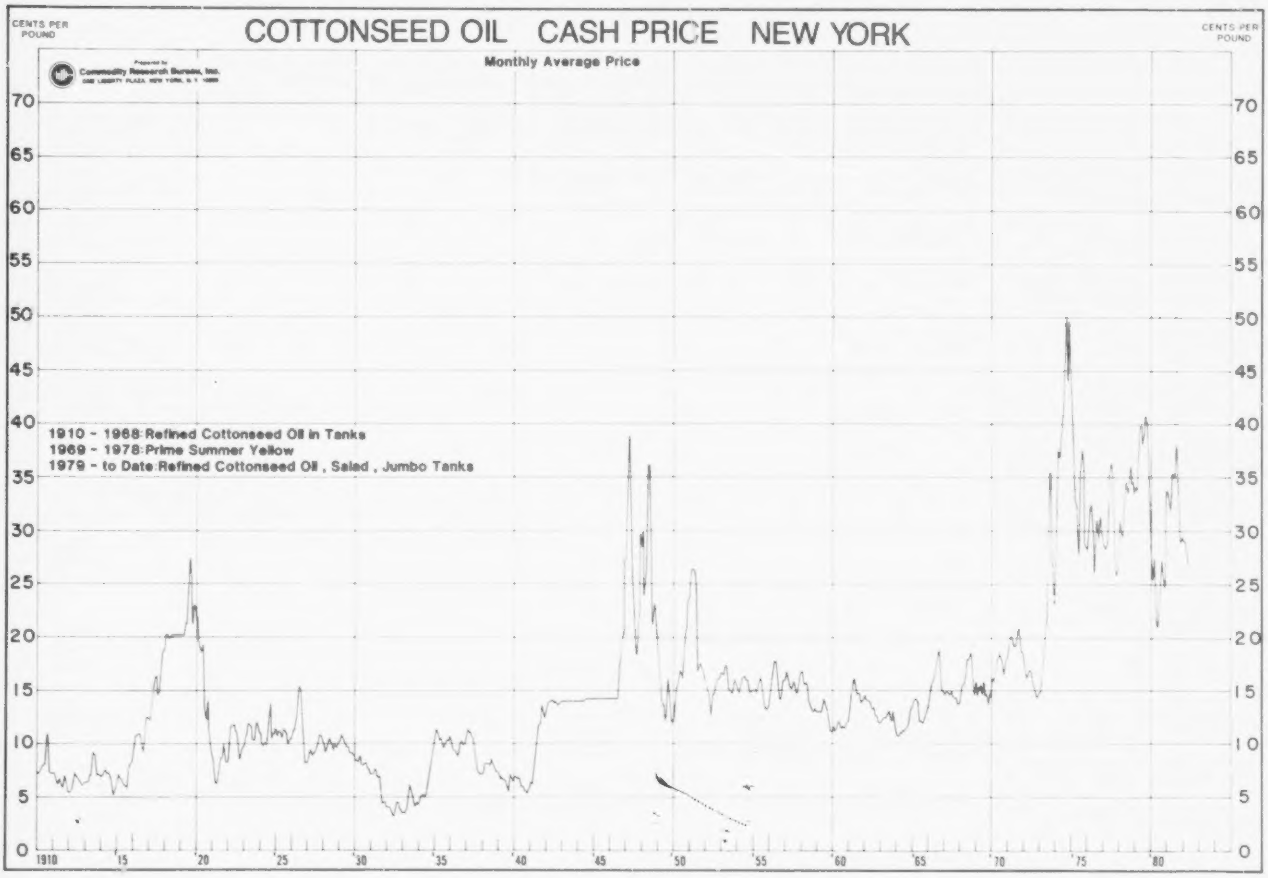
Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Total
1969–0	56.9	74.8	221.5	229.9	240.0	232.5	213.4	197.7	144.2	103.1	74.1	46.6	1,835
1970–1	38.0	45.2	194.1	219.2	218.2	215.8	202.4	192.2	145.3	111.1	86.1	61.1	1,729
1971–2	66.4	50.3	161.2	208.9	219.8	212.7	191.1	216.5	155.9	132.4	101.8	76.6	1,794
1972–3	87.2	78.4	200.4	242.4	228.4	238.7	218.0	236.8	208.0	195.7	158.8	131.0	2,224
1973–4	125.6	83.1	168.6	242.4	211.4	246.7	209.0	224.1	200.3	194.0	146.7	124.6	2,177
1974–5	109.3	95.3	171.9	186.9	194.1	207.3	192.2	203.4	159.0	150.7	117.0	97.6	1,888
1975–6	100.2	70.9	100.2	127.7	141.6	158.2	150.8	133.9	107.6	91.2	76.1	56.2	1,315
1976–7	53.0	41.5	116.6	181.0	187.8	189.2	185.6	183.9	125.0	120.1	100.1	86.6	1,571
1977–8	83.2	84.0	167.9	210.2	199.4	203.2	187.9	206.6	172.5	156.6	158.7	150.1	1,980
1978–9	148.0	121.4	162.4	197.1	184.3	197.5	193.1	201.2	166.5	155.7	122.2	105.8	1,955
1979–0	119.7	79.3	145.9	183.4	173.0	201.0	178.0	204.0	168.9	181.6	167.8	148.5	1,951
1980–1[1]	152.3	144.0	170.3	202.1	191.1	204.9	176.3	173.4	145.5	130.8	114.2	104.2	1,909
1981–2[1]	88.3	88.7	152.1	220.2	219.0	226.9	207.8						
1982–3													

[1] Preliminary. *Source: Bureau of Census*

U.S. Production of Crude Cottonseed Oil In Millions of Pounds

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Total
1968–9	22.9	39.6	162.6	167.7	173.7	186.2	155.8	145.6	127.3	112.4	80.4	50.3	1,425
1969–0	37.2	51.0	156.3	161.4	161.9	160.3	151.3	140.2	102.8	73.2	53.1	33.1	1,282
1970–1	26.6	30.5	134.3	153.4	152.7	151.5	141.2	134.0	103.3	78.8	61.0	43.5	1,211
1971–2	47.0	34.3	111.8	149.0	154.0	151.1	134.9	154.4	110.2	97.7	75.8	54.4	1,275
1972–3	61.2	53.4	139.3	165.5	157.3	163.3	152.0	163.4	141.8	136.3	108.4	92.9	1,304
1973–4	87.8	56.2	120.6	169.8	149.0	176.9	150.2	160.4	144.2	140.0	105.9	90.1	1,551
1974–5	78.0	66.9	122.8	138.2	139.1	147.6	137.5	143.4	111.6	105.8	84.1	72.3	1,347
1975–6	76.1	56.1	76.3	101.0	103.2	118.1	111.2	100.2	80.0	67.3	56.1	40.3	986
1976–7	38.0	28.2	80.1	129.2	135.6	135.0	134.3	134.4	91.1	89.3	78.5	67.3	1,141
1977–8	63.0	60.1	115.1	146.3	140.2	141.6	129.5	141.8	122.1	109.2	113.9	107.8	1,391
1978–9	103.5	82.0	108.8	134.0	123.5	134.4	128.0	135.3	115.0	103.7	86.3	73.8	1,328
1979–0[1]	85.5	53.5	98.6	126.5	119.9	142.8	125.7	145.1	119.8	125.5	116.8	104.2	1,363
1980–1[1]	104.9	93.1	116.4	130.6	122.3	131.7	118.9	115.4	100.8	88.7	77.4	69.6	1,270
1981–2[1]	62.1	60.9	111.2	153.5	161.8	154.1	146.4						
1982–3													

[1] Preliminary. *Source: Bureau of Census*



Cottonseed Oil Wholesale Prices, Refined, Tanks at N.Y. In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1969	14.5	15.4	15.2	15.6	14.6	15.9	14.5	14.8	13.8	14.8	14.5	15.8	15.0
1970	16.2	16.0	17.0	17.9	18.3	18.5	18.2	17.6	16.5	17.6	18.0	18.2	17.5
1971	19.4	20.2	20.1	19.4	19.1	19.3	20.3	20.9	20.0	18.7	18.5	17.8	19.5
1972	17.1	16.5	16.3	17.0	16.7	16.3	15.8	15.4	15.0	14.4	14.8	14.8	15.8
1973	15.2	17.6	18.6	20.0	21.5	23.2	24.0	35.5	27.1	26.7	23.3	28.8	23.5
1974	31.9	37.6	36.9	39.0	40.1	40.9	43.5	50.0	44.1	49.7	46.1	43.2	41.9
1975	38.7	33.8	32.9	32.1	27.8	28.6	35.0	37.6	35.9	32.4	28.9	28.2	32.7
1976	30.0	32.1	32.5	30.0	26.1	26.9	31.0	29.3	31.5	N.A.	29.8	28.7	29.7
1977	28.4	28.9	32.0	35.3	36.4	35.5	30.1	28.0	25.8	26.3	28.3	31.0	30.5
1978[1]	29.5	28.8	31.5	31.5	33.5	33.3	34.0	35.5	40.5	34.0	32.8	33.0	33.2
1979	33.5	38.0	38.5	39.5	38.0	38.0	40.5	38.8	39.0	36.5	34.0	28.5	36.9
1980	25.5	27.5	24.3	21.5	21.0	22.3	26.3	27.3	26.3	24.8	33.0	33.8	26.1
1981	33.4	32.0	33.5	35.4	35.0	36.5	38.0	35.5	30.0	29.0	29.3	29.0	33.0
1982	29.0												

[1] Beginning 1978, prices are for cottonseed oil, salad, jumbo tanks, F.O.B. N.Y., Tuesday. *Source: Bureau of Labor Statistics*

COTTONSEED AND COTTONSEED PRODUCTS

Supply & Distribution of Cottonseed Oil in the United States In Millions of Pounds

Crop Year Beginning Oct.	Production	Imports for Consumption	Stocks Oct. 1	Total Supply	Exports	Shipments to U.S. Terr.	Domestic Disappearance	Per Capita Consumption Lbs.	Utilization							
									Food Uses					Nonfood Uses		
									Shortening	Margarine	Salad & Cooking Oils	Other	Total	Foots & Loss	Other	Total
1969	1,282	.1	440	1,722	437.6	1.3	1,069	5.23	296	72	532	91	991	69	8	78
1970	1,211	—	214	1,425	357.5	1.4	899	4.35	203	65	485	64	818	70	11	81
1971	1,275	—	167	1,442	421.4	1.2	815	3.91	166	64	409	80	718	79	18	91
1972	1,535	.2	204	1,739	585.9	1.9	961	4.58	192	64	567	19	841	104	16	120
1973	1,551	—	190	1,741	569.2	2.5	1,034	4.89	219	64	586	55	924	101	9	110
1974	1,347	—	135	1,482	673.2	1.1	662	3.11	164	48	349	—	560	94	7	102
1975	986	—	146	1,132	534.6	.7	439	2.04	130	49	189	—	367	65	7	72
1976	1,141	—	157	1,298	610.0	.9	535	2.47	149	47	280	—	474	51	9	60
1977[3]	1,453	—	86	1,539	758	.2	696	3.17	174	44	378	—	595	90	8	97
1978	1,282	—	85	1,367	661		620		188	42	447					
1979[1]	1,423	—	86	1,509	728		659		168	25	403					
1980[2]	1,194	—	122	1,316	710		526		189	25						
1981[2]	1,345	—	80	1,425	720		605									
1982																

[1] Preliminary. [2] Estimate. [3] Data prior to 1977 are for Croy Yr. beginning Aug. 1. *Source: Economic Research Service, U.S.D.A.*

United States Production of Refined Cottonseed Oil In Millions of Pounds

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Total
1969–0	54.9	61.0	106.2	110.9	129.0	120.9	125.1	129.9	96.6	77.7	67.6	42.5	1,122
1970–1	27.1	27.6	71.6	116.0	116.6	108.5	108.6	119.8	77.2	80.4	73.2	44.9	972
1971–2	51.2	44.8	60.9	102.9	113.3	104.0	90.8	118.3	98.3	98.2	88.8	61.3	1,033
1972–3	74.6	41.8	95.4	121.9	140.1	124.9	135.0	140.7	128.9	126.0	99.1	76.8	1,305
1973–4	102.7	66.6	89.0	117.2	123.3	134.9	118.2	125.5	129.3	117.4	90.2	83.2	1,298
1974–5	88.5	63.5	81.8	113.0	117.2	124.4	125.5	117.0	109.0	102.5	93.0	74.0	1,209
1975–6	68.0	73.1	53.6	75.5	97.1	99.6	89.6	91.6	76.2	70.9	60.4	52.7	908
1976–7	48.5	33.4	37.7	73.0	86.2	113.9	117.0	123.7	94.5	98.0	87.5	66.8	866
1977–8	69.0	58.1	92.9	133.0	134.6	111.1	98.2	114.7	102.7	91.3	95.2	91.8	1,214
1978–9	117.5	84.7	83.7	116.0	100.4	118.8	113.1	126.4	108.2	97.9	78.7	78.7	1,224
1979–0	92.7	56.7	69.6	97.0	103.0	119.1	102.7	118.7	107.5	112.8	203.4	103.5	1,186
1980–1	96.2	94.8	94.1	119.8	125.1	131.3	99.6	102.1	113.0	82.9	79.1	73.7	1,212
1981–2[1]	56.9	53.1	78.6	120.6	133.5	110.2	103.2						
1982–3													

[1] Preliminary. *Source: Bureau of Census*

U.S. Stocks of Cottonseed Oil (Crude & Refined) at End of Month In Millions of Pounds

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1969–0	418.0	376.8	372.8	383.9	398.6	371.7	394.0	351.3	325.1	297.7	252.2	213.9
1970–1	158.1	121.5	140.1	163.5	184.3	202.3	224.6	246.9	265.7	279.7	224.6	167.3
1971–2	142.9	93.8	130.0	159.5	188.3	239.4	277.3	295.0	294.8	266.0	239.7	203.9
1972–3	137.9	114.2	142.5	161.5	187.4	215.3	239.0	212.7	220.6	232.5	215.8	189.9
1973–4	181.5	114.3	124.5	161.6	157.9	202.4	180.9	198.8	198.9	190.4	175.5	135.3
1974–5	121.4	109.8	123.2	166.9	177.4	197.6	210.2	188.1	208.0	173.1	164.0	146.2
1975–6	126.4	136.1	125.6	153.1	160.3	179.6	192.1	217.1	198.0	204.0	153.6	157.5
1976–7	135.9	104.9	115.5	167.2	191.6	220.7	247.0	251.4	240.3	228.1	194.9	163.2
1977–8	131.5	85.9	97.7	119.7	142.3	151.4	156.4	176.4	180.4	154.5	130.7	106.7
1978–9	102.3	84.8	101.4	123.0	127.1	152.2	152.9	141.0	143.1	141.0	139.5	116.9
1979–0	117.2	86.4	93.1	129.0	144.3	173.2	198.9	212.8	188.7	165.8	167.1	144.6
1980–1	138.6	121.9	122.5	152.8	170.1	183.5	200.1	202.4	165.9	160.1	121.7	113.0
1981–2[1]	109.4	80.0	102.5	127.2	133.2	165.7	147.8					
1982–3												

[1] Preliminary. *Source: Bureau of Census*

Average Price of Crude Cottonseed Oil, F.O.B. Southeastern Mills (Tank Cars) In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1969	10.6	11.0	11.2	11.3	11.5	11.8	11.4	11.0	10.1	10.2	10.9	10.4	11.0
1970	10.9	12.1	13.2	14.0	14.3	14.4	14.3	14.1	12.9	13.4	14.1	14.1	13.5
1971	14.5	16.1	16.1	15.6	15.3	15.3	15.4	16.5	16.1	14.4	13.9	13.9	15.3
1972	13.4	13.5	12.6	12.4	12.1	12.4	11.9	11.4	10.1	10.1	10.4	10.6	11.8
1973	10.6	12.9	14.6	14.6	14.6	14.6	14.6	14.6	22.5	22.0	19.0	27.0	19.8
1974	29.0	33.5	31.5	35.0	37.0	36.5	39.0	47.0	39.5	45.0	46.0	37.0	38.0
1975	36.5	32.0	28.0	27.0	23.0	23.0	29.0	32.0	28.5	26.5	23.5	22.0	27.6
1976	24.0	26.0	26.5	24.0	20.5	21.5	26.5	23.0	26.0	22.5	24.0	22.5	23.9
1977	22.0	23.0	27.0	30.0	31.0	31.0	23.0	22.0	19.0	20.0	20.5	23.5	24.3
1978	23.0	22.3	25.0	25.0	27.0	26.5	27.5	29.0	34.0	28.5	27.3	27.5	26.9
1979	27.3	32.0	32.5	32.0	32.0	32.0	32.0	32.0	32.9	29.7	27.6	26.2	30.7
1980	24.3	23.8	22.4	20.4	20.9	22.3	27.8	29.0	27.5	27.2	27.8	27.0	25.0
1981	25.3	24.2	25.3	27.3	26.7	26.6	27.9	24.6	20.7	20.5	20.4	19.8	24.1
1982	19.9	19.5	19.1										

Source: Economic Research Service, U.S.D.A.

U.S. Exports of Cottonseed Oil (Crude & Refined) In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1969	6.9	20.7	9.5	14.9	12.8	4.9	23.2	6.9	4.7	43.4	56.1	42.6	246.5
1970	53.0	52.2	56.2	24.0	61.0	12.2	17.5	8.8	17.8	12.0	18.6	36.7	369.8
1971	43.5	39.2	40.3	18.2	21.4	31.7	69.8	14.3	26.2	3.1	36.3	58.5	400.7
1972	23.1	47.4	50.4	47.8	30.6	49.7	33.5	58.3	13.0	18.9	70.6	32.2	475.4
1973	57.9	56.6	78.7	40.9	63.7	55.3	39.0	23.8	43.2	22.6	24.9	38.2	545.0
1974	28.8	79.0	52.3	56.3	94.2	52.2	49.5	36.7	24.2	24.1	33.8	75.1	606.1
1975	78.4	67.3	96.6	56.8	92.6	17.8	69.7	43.7	28.9	21.3	46.7	36.7	656.5
1976	76.2	49.3	51.8	42.8	65.6	47.9	23.7	24.4	13.4	33.6	15.7	76.6	520.9
1977	50.4	80.5	104.2	72.4	23.0	58.3	57.4	52.5	65.5	35.4	64.2	67.2	731.2
1978	50.6	68.2	84.9	61.6	59.8	63.5	70.2	50.0	82.3	25.9	29.2	82.5	728.8
1979[1]	56.7	71.2	89.9	51.3	52.5	63.1	63.8	18.1	56.6	34.0	48.9	27.0	633.0
1980[1]	34.8	28.1	110.5	71.0	105.0	31.4	70.3	77.6	89.3	53.7	66.6	47.1	785.4
1981[1]	77.0	29.3	66.7	82.1	72.2	85.7	46.9	35.9	46.5	42.2	37.4	80.5	702.3
1982[1]	41.2												

[1] Preliminary. *Source: Dept. of Commerce*

U.S. Consumption of Cottonseed Oil in End Products[1] In Millions of Pounds

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Total
1969–0	64.9	64.9	82.9	83.5	95.7	81.4	84.5	90.9	90.8	78.2	80.6	63.0	961.3
1970–1	63.0	65.8	77.3	79.6	76.9	67.8	73.6	69.4	56.1	61.2	70.9	50.1	811.7
1971–2	57.8	50.8	52.9	57.4	60.5	56.1	52.3	70.0	51.6	66.5	66.1	58.0	700.0
1972–3	74.9	55.0	70.1	73.1	66.8	63.7	58.4	91.8	76.7	92.2	84.1	72.3	879.1
1973–4	69.4	57.2	73.6	78.5	88.5	87.2	77.8	83.0	78.7	77.8	61.8	74.5	908.0
1974–5	57.2	52.5	58.3	62.1	61.5	60.5	57.9	58.1	56.0	66.7	53.8	56.8	698.4
1975–6	49.6	46.7	51.0	50.0	53.6	45.0	48.3	52.1	48.3	43.3	58.0	39.3	585.2
1976–7	51.2	45.0	43.7	56.6	48.0	47.9	47.8	55.7	56.7	56.1	56.2	45.9	610.8
1977–8	51.8	48.6	47.5	52.6	58.5	50.0	52.3	55.6	55.7	63.4	65.9	62.3	664.2
1978–9	60.0	57.3	55.6	64.6	54.6	55.9	57.0	60.9	48.9	64.8	45.9	41.0	666.5
1979–0[2]	53.9	43.1	44.9	50.8	51.1	55.6	56.4	56.6	58.6	68.2	65.1	57.9	662.2
1980–1[2]	65.5	55.6	57.5	51.8	49.5	38.0	44.5	47.1	44.2	50.6	48.0	39.0	591.3
1981–2[2]	43.4	46.5	44.8	58.6	55.0	45.6							

[1] Includes small amount exported but does not include imported oil. [2] Preliminary. *Source: Bureau of the Census*

Currencies

Between fall 1980 and late-summer 1981, most foreign currencies trended lower against the strong U.S. dollar. The period between fall 1981 and spring 1982 witnessed several reversals. Most foreign currencies initially gained in this period, then declined, and, then (by May) began to surge upward again.

The generally strong U.S. dollar was affected by a tight Federal Reserve monetary policy, (resulting from its efforts to curtail inflation), large U.S. budget deficits, and by mixed signs regarding prospects for recovery from the U.S. recession. Also, the relatively favorable U.S. trade balance influenced by generally soft international crude oil prices (and lower U.S. oil use) helped the U.S. dollar through spring 1982. Then the increasing likelihood of a decline in U.S. interest rates, and the firming of international crude oil prices, influenced a weakening of the U.S. dollar—boosting the relative value of foreign currencies.

Factors affecting individual foreign currency values varied. The British pound was weaker through most of 1981 because of Britain's continuing inflation despite its weak economy and high unemployment. Another negative influence on the pound was Great Britain's diminishing balance of payment surplus (in part because of the weak world oil market and resultant lower revenues from North Sea oil sales).

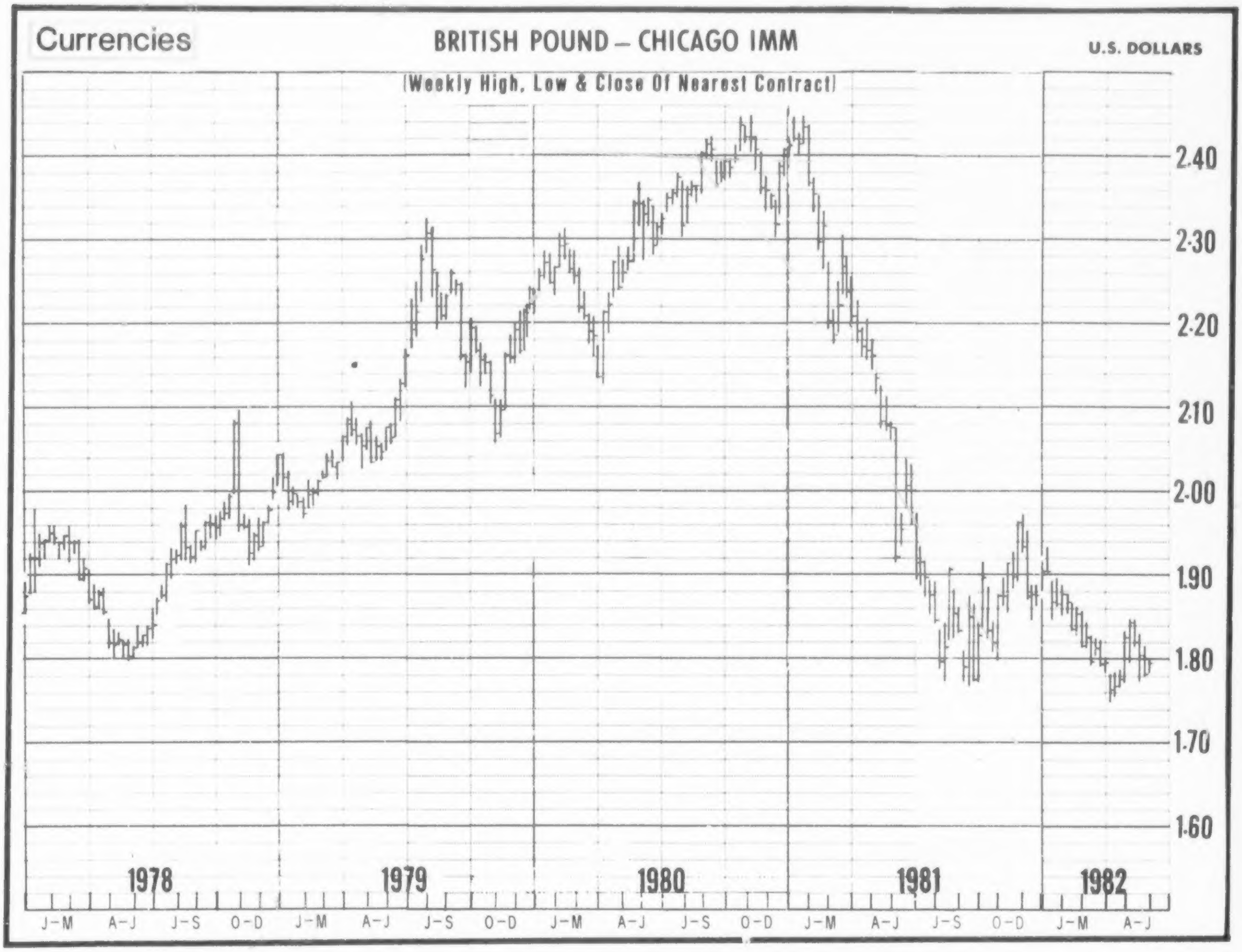
In 1981, the Deutsche mark was negatively affected by the slack West German economy and the deteriorating Polish economy—West German banks had made sizable loans to Poland. But, the easing of West German monetary policy in Spring 1982 influenced a strong rally in the mark.

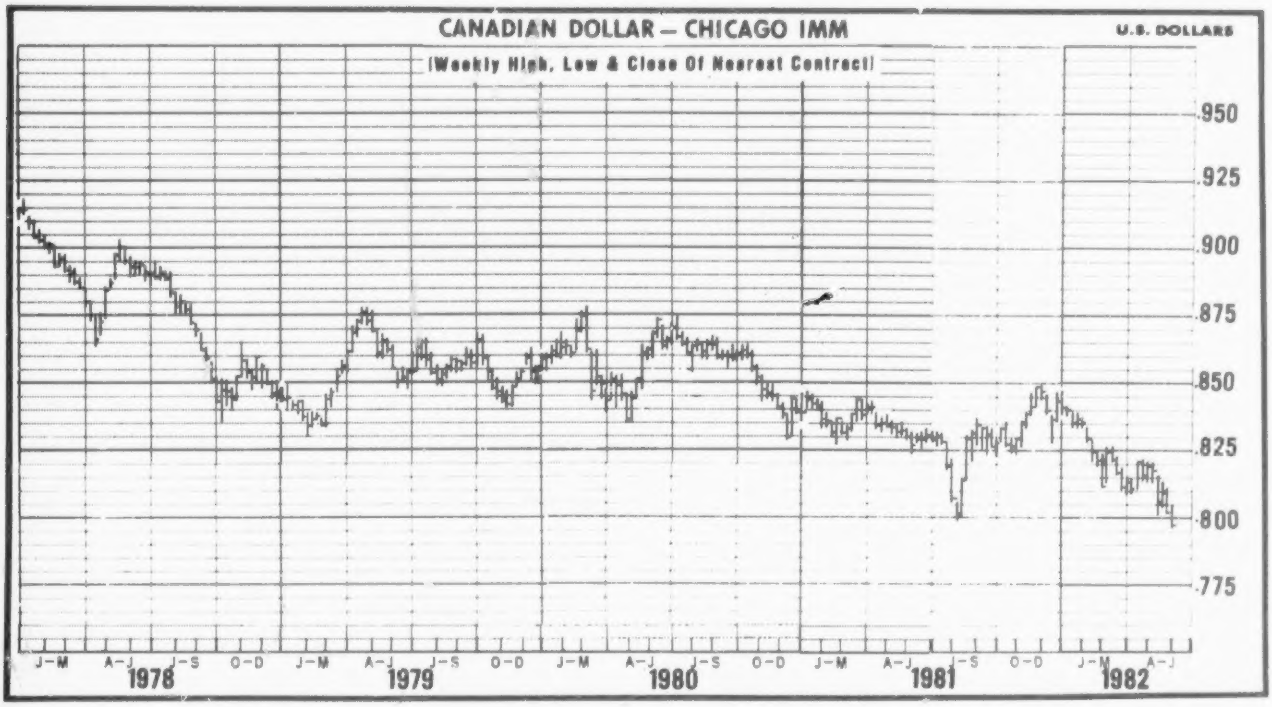
The Canadian dollar declined in 1981–82 because of the severely depressed Canadian economy. Canada's dollar had declined in 1981, in reaction to the government's economic policies (especially those restricting foreign investment in Canadian oils and minerals). Later, Canadian inflation continued at high levels despite the faltering economy and the high unemployment.

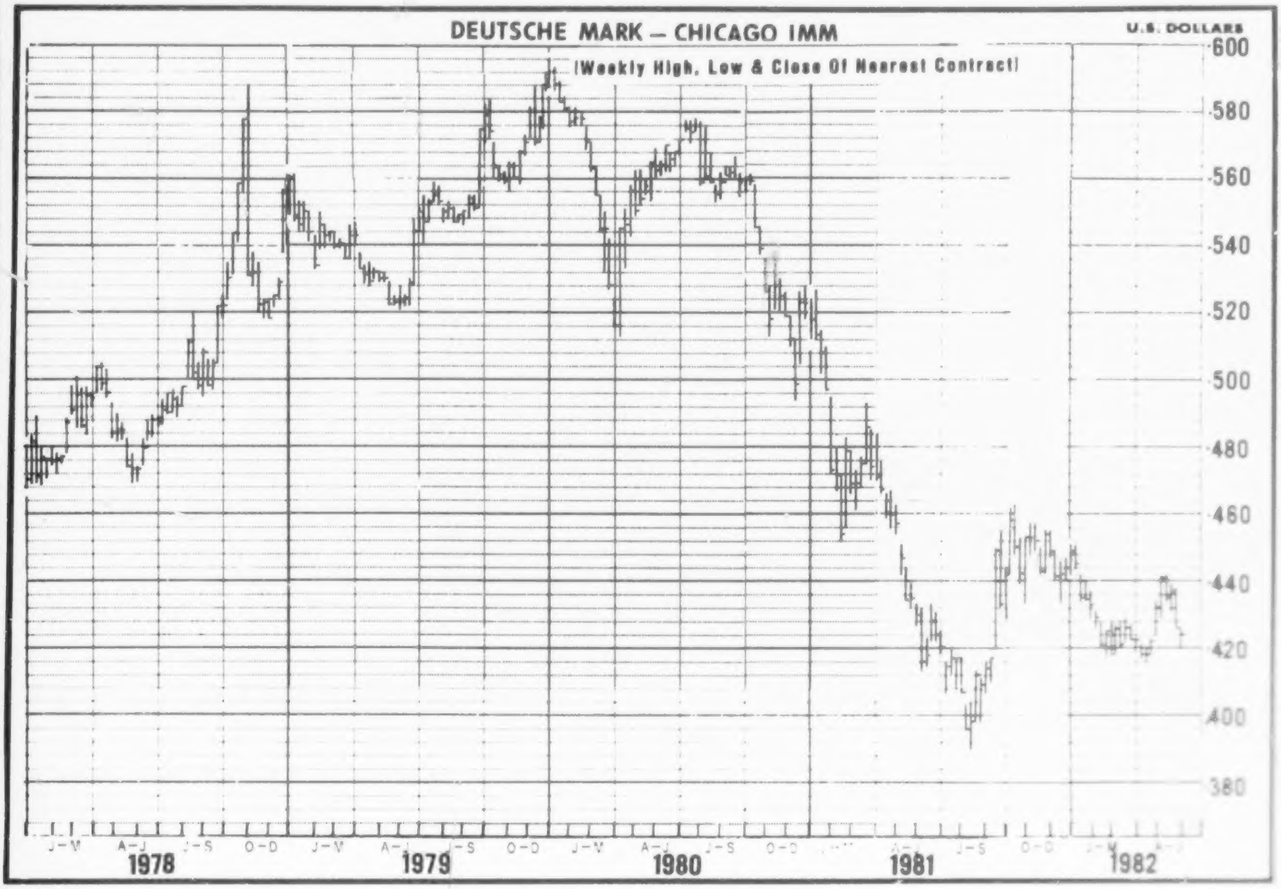
The Japanese yen was influenced by mixed prospects for future Japanese exports—though by Spring 1982 Japan's economic data still indicated a strong current account trade surplus, low unemployment, and a low rate of inflation.

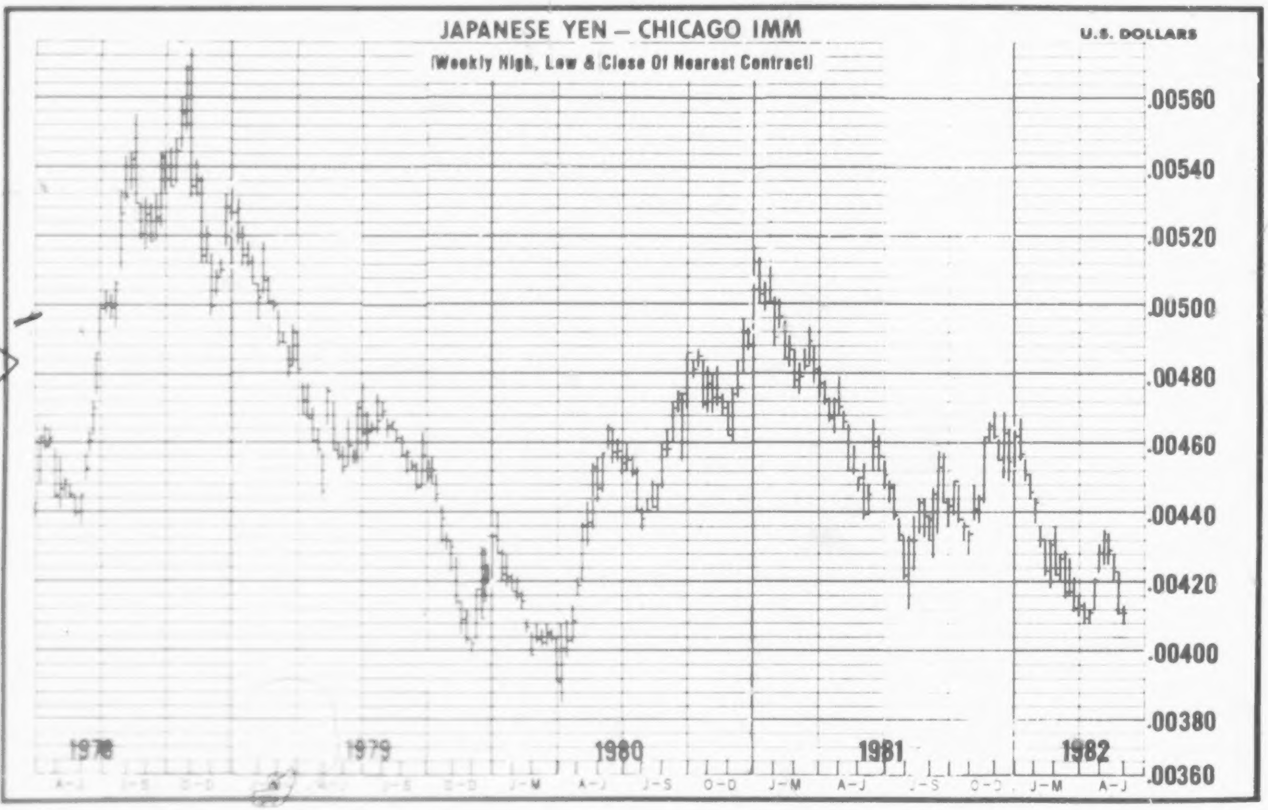
Futures Markets

The International Monetary Market of the Chicago Mercantile Exchange lists futures contracts in the British pound, Canadian dollar, Deutsche mark, Dutch guilder, French franc, Japanese yen, Swiss franc, and Mexican peso.




CANADIAN DOLLAR – CHICAGO IMM
(Weekly High, Low & Close Of Nearest Contract)
U.S. DOLLARS
.950
.925
.900
.875
.850
.825
.800
.775
J–M
A–J
J–S
O–D
1978
1979
1980
1981
1982


DEUTSCHE MARK – CHICAGO IMM
(Weekly High, Low & Close Of Nearest Contract)
U.S. DOLLARS
.600
.580
.560
.540
.520
.500
.480
.460
.440
.420
.400
.380
J–M
A–J
J–S
O–D
1978
1979
1980
1981
1982


JAPANESE YEN – CHICAGO IMM
(Weekly High, Low & Close Of Nearest Contract)
U.S. DOLLARS
.00560
.00540
.00520
.00500
.00480
.00460
.00440
.00420
.00400
.00380
.00360
1978
1979
1980
1981
1982
A-J
J-S
O-D
J-M
A-J
J-S
O-D
J-M
A-J
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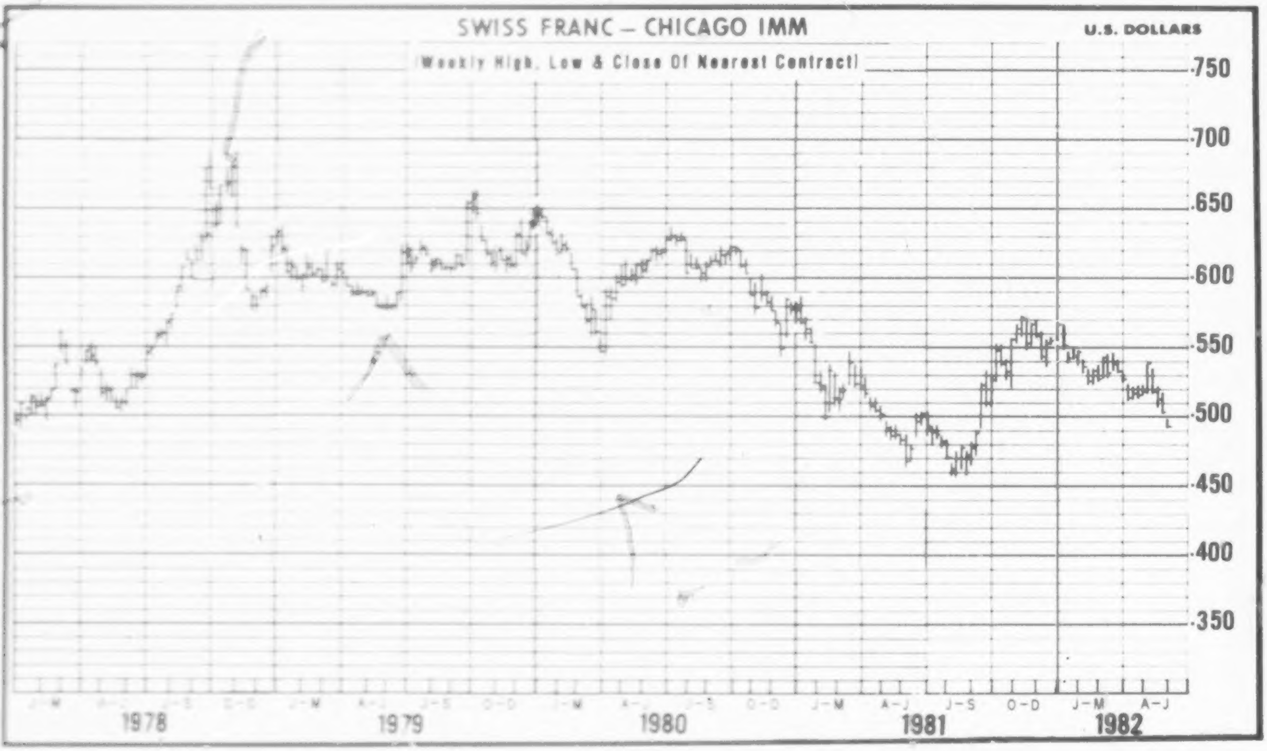
J-M
A-J
J-S
O-D
J-M
A-J


SWISS FRANC – CHICAGO IMM
(Weekly High, Low & Close Of Nearest Contract)
U.S. DOLLARS
.750
.700
.650
.600
.550
.500
.450
.400
.350
J-M
A-J
J-S
O-D
J-M
A-J
J-S
O-D
J-M
A-J
J-S
O-D
J-M
A-J
J-S
O-D
J-M
A-J
1978
1979
1980
1981
1982

Distilled Spirits

Salient Statistics of Distilled Spirits in the United States In Thousands of Gallons[1]

Fiscal Year[4] Ending Sept. 30	Whiskey					All Distilled Spirits				
	Production	Tax-Paid Withdrawals	Imports For Consumption[3]	Stocks End of Period	Bottled For Consumption	Production	Tax-Paid Withdrawals	Imports For Consumption[3]	Stocks End of Period	Bottled For Consumption
1969	179,943	100,321	74,290	933,746	188,961	985,641	240,343	87,080	1,166,100	300,537
1970	160,039	111,796	75,590	959,727	192,331	917,457	256,342	90,890	1,197,001	312,074
1971	127,220	111,972	89,290	960,509	186,050	759,251	256,999	102,140	1,162,398	310,056
1972	126,274	120,794	87,690	958,386	195,819	764,351	281,584	100,160	1,107,557	335,482
1973	111,974	135,937	92,300	926,112	188,245	859,152	282,840	107,280	1,060,634	336,813
1974	92,599	138,105	93,920	875,742	184,296	821,602	292,428	110,980	1,006,206	348,776
1975	49,958	136,950	94,980	779,762	181,683	717,550	295,445	113,460	950,044	356,916
1976	79,178	134,773	92,070	722,884	178,701	667,682	304,491	112,710	873,632	369,346
1977[4]	81,828	125,878	91,150	678,682	165,751	656,128	295,845	112,990	810,948	360,697
1978	71,382	125,977	101,890	624,886	175,970	676,723	321,294	128,600	759,592	396,479
1979[3]	101,260[2]	127,050[2]	95,400	608,060			233,300[2]	123,650	670,360	447,520[2]
1980[3]	84,310[2]		86,000	565,610				113,710	625,830	449,420[2]
1981[3]				543,600				117,930	612,740	448,820[2]
1982										

[1] Production, withdrawals, and stocks are tax gallons; imports are proof gallons; consumption are wine gallons. [2] Data are for CALENDAR YEARS. [3] Preliminary. [4] Fiscal year ending JUNE 30 PRIOR TO 1977.
Sources: Internal Revenue Service; Department of Commerce

Distilled Spirits Bottled for Consumption in the U.S. In Millions of Wine Gallons

Fis. Yr. End. Sept. 30[1]	Whiskey	Brandy	Rum	Gin	Cordials & Liqueurs	Vodka	Alcohol & Spirits	Other Spirits	Total
1968	182.130	10.317	2.090	32.479	17.196	39.543	.139	.651	284.543
1969	188.960	11.071	2.337	33.857	20.031	43.211	.131	.938	300.537
1970	192.331	11.735	2.533	35.780	20.699	47.843	.123	1.030	312.074
1971	186.050	11.913	2.864	35.042	20.555	52.407	.148	1.078	310.056
1972	195.819	13.053	3.378	38.009	23.311	60.116	.146	1.649	335.482
1973	188.245	13.908	4.693	35.890	25.095	66.494	.144	2.344	336.813
1974	184.296	13.855	5.495	37.319	28.391	75.285	.155	3.979	348.776
1975	181.683	13.483	6.791	37.169	30.416	82.159	.180	5.035	356.916
1976	178.701	14.150	8.789	39.242	34.189	88.459	.296	5.519	369.346
1977[1]	165.751	14.660	11.147	37.055	35.822	89.833	.256	6.173	360.697
1978	175.970	14.451	13.952	39.938	44.357	94.152	.214	13.445	396.479
1979									

A "wine gallon" is a U.S. gallon of liquid measure equivalent to the volume of 231 cubic inches. [1] Fiscal year ending JUNE 30 PRIOR TO 1977. *Source: Internal Revenue Service*

Grains Used in Production of Alcohol, Dist. Spirits, & Ferm. Malt Liquors in U.S. In Thousands of Bushels

Year Begin. July 1	Corn and Products			Barley and Malt			Wheat				
	Alcohol & Distilled Spirits	Fermented Malt Liquors[3]	Total	Alcohol & Distilled Spirits	Fermented Malt Liquors	Total	Alcohol & Distilled Spirits	Fermented Malt Liquors	Total	Rye[2]	Sorghum Grains
1964–5	27,704	39,467	67,171	6,181	88,692	94,873	68	9	77	3,801	3,493
1965–6	29,830	40,688	70,518	7,064	90,340	97,404	66	8	74	4,393	3,062
1966–7	32,627	40,658	73,285	6,812	96,204	103,016			75	4,663	2,786
1967–8	33,980	40,247	74,227	7,101	97,350	104,451				4,744	2,809
1968–9	33,024	41,537	74,561	6,968	100,956	107,924				4,681	3,372
1969–0	31,202	43,121	74,333	6,669	109,512	116,181				4,279	2,963
1970–1	24,030	45,251	69,281	4,338	108,201	113,039				3,435	3,716
1971–2	24,848	45,441	70,289	4,496	113,209	117,705				3,066	4,750
1972–3	29,498	45,257	74,755	4,193	114,608	118,801					2,025
1973–4[1]	33,095	46,978	80,073	3,659	121,892	125,551					2,515
1974–5											

[1] Preliminary. [2] Used principally for distilled spirits. [3] Principally corn grits & flakes. *Source: Internal Revenue Service*

Eggs

U.S. egg production in calendar 1981 declined 3.2 million dozen from 1980, to 5.803 billion dozen. This was the first year that output had decreased since 1976. The decline resulted from a smaller laying flock —839,000 head less on average—but output per layer was about the same as in 1980.

High feed costs during the first half of 1981 resulted in unfavorable returns for producers, and replacements were reduced. The flock was maintained by delayed culling of old hens and by increased force molting. During most of 1981, the percentage of the flock that had been force molted was at record levels and hit almost 20 percent on January 1, 1982. The laying flock was relatively old during 1981.

Domestic consumption of eggs decreased in 1981 because of increased exports, greater hatching use, and fewer imports than in 1980. Egg consumption for 1981 was estimated at 264 eggs per person, almost 8 percent below 1980. Shell egg use was off 5 percent and processed use was off 3 percent from a year earlier. Exports of shell eggs and egg products totaled 234 million dozen (shell equivalent), up 64 percent from 1980. U.S. exports of table eggs increased by 75 percent in 1981, compared with the 1980 level, and 70 percent of the 1981 total went to the Middle East. The impressive increase in U.S. exports to the Middle East was due to increased demand from oil-producing countries, low U.S. egg prices, and the unique ability of the U.S. industry to fill large export orders quickly. Exports of U.S. table eggs to Hong Kong also rose significantly, probably due to lower shipments from Hong Kong's other major supplier, China. U.S. exports of egg products in 1981 were substantially above the 1980 level, primarily as a result of increased exports to Japan. Egg production in Japan declined slightly in 1981, while Japanese confectioners, bakers, and producers of meat and fish pastes increased their demand for egg products.

U.S. imports declined 36 percent from 1980's 5 million dozen, shell equivalent. Imports are historically small and accounted for only one-tenth of 1 percent of the total 1981 egg supply.

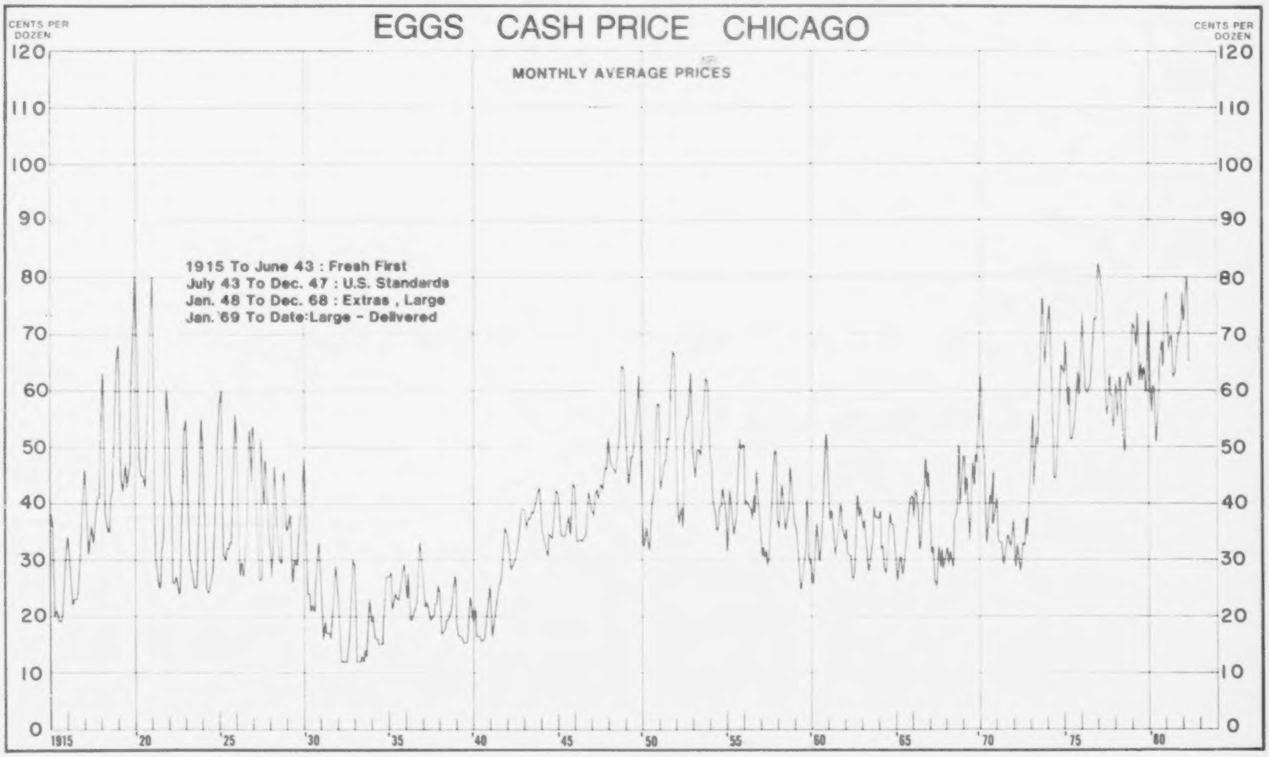
Shell eggs going to breakers continued to increase, as more egg products were exported, but stocks of frozen eggs remained low. Shell eggs broken under Federal inspection totaled 732 million dozen, up from 728 million dozen in 1980. Liquid egg production for immediate consumption and for processing rose 8 percent. Frozen egg production increased about 1 percent, but dried egg output was down 1 percent from a year earlier.

Prices for Grade A large eggs in cartons in New York averaged 73 cents in 1981, about 6 cents above 1980. While prices were above 1980 during most of last year, the biggest increase was in the first half, when prices were up 11 cents a dozen. Prices weakened late in 1981 but still averaged 1 cent above a year earlier during October–December.

Hatching egg use in 1981 was estimated to have increased 1 percent to 506 million dozen. All of the gain was due to a larger number of broiler chicks hatched. The 1981 hatch of chicks intended as table egg layers was 8 percent below 1980.

Futures Market

Egg futures are presently listed (but inactive) on the Chicago Mercantile Exchange.



World Production[2] of Eggs In Billions of Eggs

Year	Argentina	Australia	Bel. & Lux.	Brazil	Canada	Israel	France	W. Germany	Italy	Japan	Netherlands	Poland	Spain	South Africa	U.S.S.R.	Un. Kingdom[3]	United States
1969	2.9	2.3	4.0	*1967-71*	5.6	1.2	11.2	14.7	10.3	27.9	4.4	6.7			37.2	15.6	67.5
1970	3.0	2.6	4.4	*Avg.*	5.9	1.3	11.4	15.4	11.1	30.0	4.6	6.9			40.7	15.1	68.5
1971	3.1	2.9	4.0	*(5.3)*	5.9	1.4	11.5	15.4	10.4	30.0	4.4	7.1			45.1	14.9	70.1
1972	3.4	3.4	3.9	5.8	5.6	1.4	11.5	16.1	10.6	30.5	4.4	7.5			47.9	14.6	69.5
1973	3.1	3.3	3.7	6.0	5.5	1.5	12.3	15.5	11.6	31.1	4.7	7.4			50.8	12.9	66.6
1974	3.4	3.3	3.8	6.0	5.5	1.6	12.5	15.0	11.3	30.2	4.8	7.9			55.5	14.4	65.9
1975	3.8	3.4	3.7	6.0	5.4	1.7	13.1	15.0	11.4	29.8	5.3	8.0			57.4	13.6	64.4
1976	3.7	3.2	3.5	6.1	5.2	1.8	12.9	14.4	11.5	31.0	5.6	8.0			55.6	14.0	64.8
1977	3.1	3.3	3.8	6.3	5.5	1.7	13.1	14.8	11.3	31.4	6.0	8.5	10.9	3.9	61.2	14.1	64.9
1978	3.3	3.5	3.8	6.6	5.5	1.8	13.5	14.3	11.0	32.8	7.0	8.5	10.1	3.9	64.5	14.3	67.3
1979	3.4	3.4	3.5	7.2	5.6	1.8	13.8	13.3	11.0	33.2	8.2	8.7	11.0	3.1	65.6	15.0	69.3
1980[1]	3.4	3.4	3.3	9.6	5.9	1.6	14.5	13.7	10.7	33.3	9.0	8.8	9.8	3.1	67.8	14.0	69.7
1981[4]	3.3	3.6	3.2	9.6	5.7	1.4	15.1	13.3	11.1	33.0	9.4	8.8	10.5	3.3	69.7	13.8	69.4
1982																	

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[1] Preliminary. [2] Relates to farm production in Canada and the United States, but information for many countries is not explicit on this point. [3] Farm production, years ending May. [4] Forecast. *Source: Foreign Agricultural Service, U.S.D.A.*

Salient Egg Statistics in the United States

Year	Hens & Pullets — Millions		Rate of Lay Per Layer — Number		Eggs — Billions				Gross Income[5] Billion $	Million Dozen				Civilian Consumption	
	On Farms Jan. 1[10]	Avg.[9] Number During Year	On Farms Jan. 1[2]	During Year[3]	Farm Prod.	Price Per Dz.	Consumed[4] on Farms	Sold		Total Egg Prod.[6]	Imports[7]	Exports[8] & Shipments	Used for Hatching	Total	Per Capita Eggs
1972	321.4	304.5		227	69.2	30.9	.69	68.53	1.78	5,742	1	56	391	5,237	304
1973	300.7	290.6		227	66.0	52.5	.63	65.41	2.89	5,502	13	49	392	5,051	291
1974	296.6	284.7		230	65.6	53.2	.58	65.04	2.91	5,461	13	57	366	5,005	286
1975	286.0	278.1		232	64.6	52.4	.54	64.09	2.82	5,382	5	62	372	4,924	280
1976	279.9	274.1		235	64.5	58.3	.50	64.01	3.13	5,377	3	65	409	4,858	274
1977	280.0	274.9		235	64.6	55.6	.48	64.13	2.99	5,407	14	91	429	4,864	272
1978	287.7	281.6		239	67.2	52.2	.46	66.68	2.92	5,607	11	120	463	5,009	278
1979	291.7	288.6		240	69.2	58.3	.45	68.76	3.36	5,777	10	104	498	5,161	278
1980[1]	296.0	287.7		242	69.7	56.3	.44	69.24	3.27	5,806	5	167	499	5,121	272
1981[1]	294.0	286.9		243	69.6	62.3				5,803	3	257	506	5,020	264
1982															

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[1] Preliminary. [2] Number of eggs produced during the year divided by number of hens & pullets on hand Jan. 1. [3] Number of eggs produced during the year divided by the average number of hens & pullets of laying age on hand during the year. [4] Consumed in households of farm producers. [5] Value of sales plus value of eggs consumed in households of producers. [6] Farm production, plus nonfarm output estimated at 10% of farm through 1954; thereafter, 1 percentage point less each year. [7] Shell-egg equivalent of eggs and egg products. [8] Shell eggs & shell equivalent of frozen & dried egg products. [9] Average number of layers on farms during the year. [10] Of laying age. *Source: Agricultural Marketing Service, U.S.D.A.*

Average Wholesale Prices of Shell Eggs (Large) Delivered; Chicago In Cents Per Dozen

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1971	37.2	33.2	33.1	33.0	29.1	29.8	33.0	34.5	32.9	32.4	33.5	37.0	33.2
1972	30.0	28.8	32.8	29.5	28.0	29.4	33.0	32.7	37.3	34.4	40.2	49.8	33.8
1973	55.9	43.1	49.9	51.9	50.5	58.2	65.1	76.9	70.0	64.6	67.8	72.8	61.0
1974	75.0	69.5	62.1	54.2	44.5	44.6	50.5	57.5	64.6	63.2	63.0	68.8	59.8
1975	63.7	57.4	60.7	51.6	51.3	51.7	53.9	59.7	63.3	59.1	66.8	73.8	59.4
1976	70.9	64.2	59.5	58.6	60.7	60.9	65.4	70.6	72.8	70.6	76.7	82.3	67.8
1977	78.7	75.6	67.5	62.4	55.7	57.0	62.8	59.3	59.3	53.7	55.0	61.5	62.4
1978	55.2	62.8	62.0	57.0	52.0	49.3	61.2	61.8	63.2	60.8	67.2	71.6	60.3
1979	71.3	67.7	73.5	68.7	61.9	64.8	61.9	64.0	62.0	59.7	66.3	72.4	66.2
1980	59.9	56.3	60.6	56.8	50.8	54.6	63.2	65.9	68.8	64.3	75.7	77.3	62.8
1981	71.4	67.2	62.9	69.7	62.2	62.9	67.5	68.7	70.7	71.3	77.3	72.1	69.0
1982[1]	75.0	73.0	74.5	69.0									

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[1] Preliminary. *Source: Commodity Economics Division, U.S.D.A.*

EGGS

Total Eggs—U.S. Supply and Distribution In Millions of Dozen

Year & Quarters	Supply				Utilization					
							Domestic Disappearance			
									Civilian[1]	
	Production	Imports[1]	Beginning Stocks[1]	Total Supply	Ending Stocks[1]	Exports & Shipments[1]	Eggs Used for Hatching	Military	Total	Per Capita (Number)
1978 I	1,379	1.3	23.7	1,404	18.1	37.4	113.8	6.6	1,228	67.1
II	1,396	3.3	18.1	1,417	21.0	30.0	131.5	7.0	1,228	66.9
III	1,385	6.4	21.0	1,412	23.1	24.9	104.3	7.4	1,253	68.1
IV	1,449	.1	23.1	1,472	20.3	28.0	116.0	6.9	1,301	70.5
1979 I	1,424	.4	20.3	1,445	16.7	24.4	125.4	5.8	1,273	68.8
II	1,436	2.2	16.7	1,455	18.1	22.7	135.3	7.0	1,272	68.5
III	1,438	4.2	18.1	1,461	19.2	25.4	119.2	6.4	1,291	69.3
IV	1,479	2.7	19.2	1,500	18.9	31.2	117.7	6.0	1,327	71.1
1980 I	1,466	.2	18.9	1,485	18.4	35.8	127.4	6.4	1,298	69.3
II	1,425	1.6	18.4	1,445	23.2	37.3	128.7	5.7	1,250	66.6
III	1,432	1.9	23.2	1,457	23.7	39.5	119.9	6.7	1,267	67.3
IV	1,483	1.3	23.7	1,508	19.4	53.9	123.1	5.3	1,307	69.2
1981[3] I	1,450	—.8	19.4	1,469	17.9	60.5	130.7	5.5	1,254	66.3
II	1,429	1.8	17.9	1,449	19.6	62.3	130.8	6.6	1,230	64.9
III	1,438	1.8	19.6	1,460	19.4	65.6	122.9	6.1	1,245	65.5
IV	1,485	.4	19.9	1,506	17.4	68.3	122.0	6.9	1,291	67.7
1982[3] I	1,440									
II										
III										

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[1] Shell eggs & the approx. shell-egg equivalent of egg product. [2] Less than 100,000 dozen. [3] Forecast.
Source: Commodity Economics Division, U.S.D.A.

Shell Eggs: Civilian Per Capita Disappearance in the United States Number of Eggs

Year	Shell Equivalent													Processed[2]	Total
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total[1]		
1971	24.7	21.6	23.9	23.1	23.7	22.1	22.9	23.1	21.9	23.3	22.8	24.2	278	36	314
1972	24.5	22.3	24.2	22.9	22.7	21.1	22.6	22.2	21.6	22.2	21.7	23.6	272	36	308
1973	23.4	20.5	23.1	22.4	22.5	20.8	21.4	21.2	20.7	21.4	21.5	23.1	262	32	294
1974	22.8	19.8	22.2	21.0	21.2	20.2	20.7	20.9	20.3	20.9	20.6	22.1	254	34	288
1975	22.0	19.4	21.9	20.4	20.6	19.2	20.1	20.6	19.9	20.9	20.9	21.7	248	31	279
1976	21.7	19.6	20.5	19.6	20.5	19.2	20.1	20.1	19.3	20.3	19.5	20.8	241	33	274
1977	20.9	17.9	20.1	19.2	19.4	18.1	19.1	19.1	19.0	20.7	20.2	21.4	235	37	272
1978	21.1	18.6	20.8	20.0	20.3	18.8	19.7	19.8	19.7	20.9	20.7	21.9	242	36	278
1979	21.3	18.5	21.0	20.0	20.1	19.2	20.1	19.9	19.8	20.2	20.2	21.8	242	36	278
1980	21.1	19.0	20.9	19.4	19.8	18.7	19.0	19.6	19.4	19.8	20.0	20.7	237	35	272
1981[3]	20.4	17.6	20.3	18.9	19.6	18.1	19.1	19.3	18.6	20.1	19.8				264
1982															

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[1] Monthly totals do not necessarily add to yearly figures due to rounding. [2] Liquid, frozen, & dried egg (egg solids) converted to shell egg equivalent. [3] Preliminary. *Source: Economic Research Service, U.S.D.A.*

Egg-Feed Ratio[1] in the United States

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1971	8.0	7.4	7.3	7.3	6.7	6.4	6.4	7.1	7.1	6.9	7.2	8.2	7.2
1972	7.1	7.0	7.6	6.5	6.4	6.4	7.0	6.9	7.7	6.9	8.0	8.7	7.2
1973	9.0	7.3	7.7	7.9	6.9	6.4	7.1	8.3	8.6	8.2	8.6	8.5	7.9
1974	8.8	8.4	7.5	7.0	6.2	5.8	6.2	5.7	6.7	6.5	6.6	7.2	6.9
1975	7.2	7.2	7.6	6.5	6.5	6.3	6.4	6.8	7.5	7.1	8.1	9.0	7.2
1976	8.6	8.2	7.4	7.3	7.5	6.8	6.8	7.6	7.7	7.8	8.7	9.1	7.9
1977	8.5	8.1	7.3	6.8	5.9	5.8	6.7	7.2	7.6	7.1	7.3	7.4	7.1
1978	6.7	7.5	7.4	6.7	6.3	5.6	6.4	7.0	7.3	7.0	7.5	8.0	7.0
1979	7.8	7.7	8.0	7.4	6.9	6.7	6.1	6.1	6.4	6.1	6.8	7.3	6.9
1980	6.6	5.9	6.3	6.0	5.3	5.5	5.7	6.0	6.2	5.7	6.0	6.6	6.0
1981[2]	5.9	5.7	5.7	6.0	5.2	5.2	5.5	5.7	6.4	6.5	7.2	6.7	6.0
1982[2]	6.6	6.8											

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[1] Pounds of laying feed equivalent in value to one dozen eggs. [2] Preliminary. *Source: Commodity Economics Division, U.S.D.A.*

Hens and Pullets of Laying Age in the U.S., First of Month In Millions

Year	Jan. 1	Feb. 1	Mar. 1	April 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1978	287.7	283.7	280.7	279.7	278.2	277.3	275.0	275.2	279.0	283.9	288.3	293.3
1979	291.7	292.1	290.2	288.6	285.5	283.4	283.7	285.1	287.2	290.2	291.7	294.5
1980	296.0	293.2	288.6	285.3	280.8	279.4	279.9	282.2	287.8	291.7	292.8	294.3
1981[1]	294.0	291.3	290.5	285.5	283.6	281.6	280.0	283.7	282.7	286.3	289.7	291.2
1982[1]	291.7	290.1	286.5									

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

U.S. Cold Storage Holdings of Shell Eggs, 1st of Month In Thousands of Cases (One Case = 30 Dozen)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	39	34	27	25	36	29	26	26	48	43	23	35
1979	38	22	18	24	20	27	24	32	28	31	24	24
1980	38	47	24	22	30	47	51	39	28	39	15	19
1981[1]	31	28	18	31	31	25	41	39	20	19	21	38
1982[1]	35	28	19	44								

[1] Preliminary. *Source: Crop Reporting Board U.S.D.A.*

U.S. Cold Storage Holdings of Frozen Eggs, 1st of Month In Millions of Pounds[1]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1977	26.1	26.9	24.9	24.6	25.3	28.0	31.4	35.1	35.4	33.7	33.4	31.2
1978	29.7	27.0	25.5	22.9	22.9	22.2	26.6	28.0	28.7	28.7	27.6	25.6
1979	25.3	25.5	24.5	21.1	21.7	21.6	22.8	25.9	24.7	24.1	25.6	23.4
1980	23.4	22.1	23.8	23.4	25.9	26.6	28.6	29.4	30.7	29.7	29.2	25.3
1981[2]	24.3	24.3	24.2	22.3	21.9	22.7	24.2	26.9	27.2	25.5	25.6	23.7
1982[2]	21.6	21.2	19.4	17.2								

[1] Converted on basis 39.5 pounds frozen eggs equals 1 case. [2] Preliminary. *Source: Crop Reporting Board, U.S D.A.*

Egg Production in the United States In Millions of Eggs

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total[2]
1977	5,447	4,917	5,546	5,361	5,478	5,213	5,310	5,369	5,318	5,592	5,534	5,803	64,602
1978	5,743	5,106	5,700	5,559	5,723	5,460	5,541	5,574	5,495	5,751	5,685	5,948	67,157
1979	5,892	5,290	5,909	5,721	5,862	5,648	5,798	5,810	5,653	5,881	5,797	6,064	69,209
1980	6,048	5,593	5,955	5,714	5,799	5,584	5,706	5,750	5,724	5,950	5,798	6,050	69,684
1981[1]	6,005	5,404	5,992	5,735	5,827	5,590	5,781	5,814	5,664	5,902	5,840	6,079	69,603
1982[1]	5,958	5,333											

[1] Preliminary. [2] Dec. 1 previous year thru Nov. 30. *Source: Crop Reporting Board, U.S.D.A.*

Egg-Type Chicks Hatched by Commercial Hatcheries in the United States In Millions

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1977	40.3	40.9	51.3	55.1	52.5	44.7	37.4	37.8	37.4	37.6	34.5	32.5	501.9
1978	36.9	36.9	46.8	50.9	53.7	45.6	35.8	38.6	37.2	37.7	35.6	35.9	491.6
1979	39.9	39.5	50.1	52.4	55.9	47.8	42.8	41.9	36.6	39.5	37.5	36.4	519.0
1980	38.1	42.1	46.5	47.9	47.6	42.3	37.9	38.0	37.4	37.3	33.8	35.8	484.6
1981[1]	37.8	36.1	44.5	48.3	46.1	40.5	32.3	33.8	32.3	35.9	33.7	33.1	454.2
1982[1]	36.0	35.5	43.8										

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

Eggs Laid Per Hundred Layers in the United States In Number of Eggs

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1977	1,956	1,782	2,021	1,971	2,034	1,950	1,986	1,978	1,921	1,990	1,944	2,021	23,554
1978	2,009	1,808	2,035	1,993	2,061	1,979	2,016	2,012	1,954	2,011	1,955	2,033	23 867
1979	2,018	1,817	2,042	1,994	2,062	1,992	2,038	2,030	1,958	2,021	1,976	2,052	24,000
1980	2,053	1,922	2,075	2,019	2,070	1,997	2,030	2,017	1,975	2,036	1,975	2,057	24,252
1981[1]	2,052	1,858	2,081	2,015	2,062	1,990	2,051	2,053	1,991	2,049	2,006	2,083	24,291
1982[1]	2,048	1,850											

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

Electric Power

Total U.S. production of electricity by utilities in 1981 was approximately 2.293 billion kilowatt hours, according to Federal Power Commission data. This was 0.3 percent above 1980 production of 2.286 billion kilowatt hours, continuing an uptrend in annual output dating back to 1946.

Trends in Primary Resource Consumption

Electric utilities consumption was an estimated 24.6 quadrillon Btu of energy in 1981, 0.7 percent higher than in the previous year, and 2.0 percent higher than the energy consumed in 1979. Coal accounted for 51.6 percent of 1981 electricity production by electric utilities; natural gas, 15.3 percent; petroleum, 8.9 percent; hydro, 11.9 percent; and nuclear, 11.8 percent.

Sales of electricity to all ultimate consumers in 1981 were reported by the Federal Power Commission at a record-large 2,111 billion kilowatt hours, up 0.8 percent from the 2,094 billion kilowatt hours consumed in 1980. Electric utility consumption of coal (mostly bituminous) increased in 1981 to 596.2 million short tons vs. 569.3 million in 1980. Electric utility petroleum consumption (steam, gas turbine, internal combustion, and coke) decreased 16.5 percent to about 350.9 million barrels from 420.2 million a year earlier. Consumption of natural gas by electric utilities in 1981 approximated 3,643 billion cubic feet, down 1 percent from 1980, according to Federal Power Commission data.

Trends in Primary Resource Stocks

At the end of 1981, electric utility total coal stocks totaled 167.7 million short tons, down from 183.0 million a year earlier. Petroleum stocks (liquid) at the end of December 1981 at 127.7 million barrels were nearly 5.7 percent lower than a year earlier.

World Electricity Production In Billions of KWH

Year	Australia	Brazil	Canada	Czechoslov.	France	W. Germany	Italy	Japan	Norway	Poland	Sweden	Switzerland	South Africa	Un. Kingdom	United States	U.S.S.R.
1969	51.2		191.1	43.1	131.5		110.4	304.2	57.0	N.A.	58.1	29.7	46.2	239.1	1,553	689.1
1970	56.1		204.7	45.2	140.7		117.4	349.9	57.6	N.A.	60.6	33.2	50.8	249.2	1,640	740.9
1971	58.0		216.5	47.2	155.8		124.9	385.6	63.6	69.3	66.6	32.8	55.0	256.4	1,718	800.4
1972	60.9		240.2	51.4	170.9		135.3	428.5	67.6	76.5	71.7	31.3	59.1	263.6	1,853	857.4
1973	64.8		263.3	53.5	182.4		145.5	470.3	73.1	84.3	78.1	37.2	64.5	281.9	1,965	914.6
1974	69.8	72.4	280.3	56.0	188.2	311.7	148.9	459.0	76.7	91.6	75.1	37.4	70.1	273.1	1,967	975.8
1975	73.9	78.9	273.4	59.3	185.3	301.8	147.3	475.8	77.5	97.2	80.6	43.0	74.9	272.0	2,003	1,039
1976	76.6	90.0	294.0	62.7	203.1	333.6	163.5	511.8	82.1	104.1	86.4	36.2	79.4	276.9	2,123	1,111
1977	82.5	100.8	317.2	66.5	210.7	335.3	166.5	532.6	79.7	109.4	90.0	45.9	80.3	283.1	2,211	1,150
1978	88.5	112.6	335.7	69.1	226.7	353.4	175.0	564.0	81.1	115.6	92.9	42.3	84.5	287.7	2,286	1,200
1979	93.7	124.2	352.3	68.1	241.1	374.2	180.5	589.6	89.0	117.5	94.3	42.7	90.3	299.9	2,319	1,238
1980[1]	97.9	137.4	366.4	72.6	243.3	368.8	185.0	514.0	84.0	121.9	93.6	46.6	95.0	285.0	2,356	1,295
1981[2]	103.6	140.0	380.0	75.0	260.0	370.0	190.0	520.0	93.5	115.0	99.6	50.0	98.0	277.7	2,400	1,325
1982																

[1] Preliminary. [2] Estimate. *Source: United Nations*

Installed Capacity, Capability & Peak Load of the U.S. Electric Utility Industry In Millions of Kilowatts

	Installed Generating Capacity at Dec. 31														
		Type of Prime Mover			Type of Ownership										
Year	Total Electric Utility Industry	Hydro	Gas Turbine & Steam[2]	Internal Combustion	Investor Owned	Cooperatives	Sub-Total Gov't.	Municipal Utilities	Federal	Power Districts, State Projects	Capability at Winter Peak Load	Non-Coincident Winter Peak Load	Margin of Reserve (%)	Generation	Load Factor (%)
1969	313.3	52.8	233.1	4.2	240.1	4.3	68.9	20.0	36.1	12.8	311.5	236.6	16.6	1,446	64.1
1970	341.1	55.1	252.4	4.4	262.7	5.2	73.2	20.9	38.7	13.6	339.1	248.6	19.0	1,536	63.9
1971	367.4	55.9	259.7	4.5	286.9	5.4	75.1	21.8	39.7	13.7	366.7	261.7	20.9	1,617	63.2
1972	399.6	56.6	322.9	4.8	314.9	6.7	78.0	23.2	40.6	14.2	394.1	291.0	19.6	1,752	62.5
1973	439.9	61.8	352.1	4.9	346.5	7.3	86.1	25.0	44.5	16.6	433.2	295.1	20.8	1,869	62.0
1974	476.0	63.6	375.7	5.0	376.1	7.5	92.4	27.3	45.8	19.2	467.4	302.5	27.2	1,872	61.2
1975	508.4	65.9	397.6	5.1	399.0	9.1	100.2	28.8	50.1	21.3	492.5	331.1	34.3	1,920	61.4
1976	531.2	67.8	415.2	5.3	415.5	9.9	105.7	30.6	51.7	23.4	511.0	349.9	34.5	2,040	62.6
1977	560.4	63.8	436.4	5.3	438.4	10.9	111.1	34.3	53.2	24.6	537.6	360.2	30.2	2,132	61.4
1978	579.3	71.0	449.2	5.5	453.6	11.6	114.0	34.4	54.3	25.3	561.6	383.1	33.7	2,219	62.1
1979	598.4	75.4	463.0	5.5	464.1	13.8	120.5	34.5	58.3	27.6	554.3	368.9	36.9	2,247	64.4
1980[1]	613.7	76.4	475.3	5.6	477.1	15.4	121.2	34.6	59.1	27.5	572.2	384.6	30.8	2,293	61.1
1981															

[1] Preliminary. [2] Nuclear Power for 1970–80; 6.5, 8.7, 15.3, 21.1, 31.7, 39.8, 42.8, 49.9, 53.5, 54.6; 56.5. *Source: Federal Power Commission*

Available Electricity & Energy Sales in the United States In Billions of Kilowatt Hours

	Generation						Sales to Ultimate Customers								
	Electric Utility Industry										Commercial & Industrial[3]				
Year	Hydro	Steam	Nuclear	Total[5]	Other Sources [2]	Total	Total Million $	Total[4]	Residential	Inter-Departmental	Small	Large	Street & Highway	Other Public Authorities	Railways & Railroads
1969	250.2	1,173	13.9	1,442	111	1,553	20,139	1,307	407.9	4.2	286.7	557.2	10.8	35.9	4.5
1970	247.5	1,256	21.8	1,532	108	1,640	22,066	1,391	447.8	4.7	312.8	572.5	11.2	37.8	4.6
1971	266.3	1,302	38.1	1,613	103	1,716	24,725	1,466	479.1	4.9	333.8	592.7	11.7	39.8	4.5
1972	272.6	1,416	54.1	1,750	105	1,854	27,921	1,578	511.4	5.1	361.9	639.5	12.2	43.2	4.4
1973	271.6	1,495	83.3	1,856	103	1,959	31,663	1,703	554.2	5.5	396.9	687.2	12.8	42.3	4.2
1974	300.9	1,446	113.7	1,866	102	1,968	39,127	1,701	555.0	5.4	392.7	689.4	13.3	40.7	4.3
1975	300.1	1,439	172.5	1,918	85	2,003	46,853	1,733	586.1	5.4	418.1	661.6	13.9	43.6	4.3
1976	283.7	1,558	191.1	2,038	87	2,125	53,463	1,850	613.1	6.4	440.6	725.2	14.4	45.6	4.3
1977	220.4	1,648	250.9	2,124	88	2,212	62,610	1,951	652.3	7.2	469.2	757.2	14.4	46.2	4.2
1978	280.4	1,645	276.4	2,206	79	2,300	69,853	2,018	679.2	7.1	480.7	782.1	14.8	49.5	4.3
1979	279.8	1,708	255.2	2,247	71	2,318	77,692	2,079	694.3	7.4	493.5	815.6	14.8	49.5	4.2
1980[1]	276.0	1,756	251.1	2,283	68	2,351	91,619	2,095	720.8	6.5	509.5	791.2	14.6	48.4	4.3
1981[6]							105,868	2,112	716.5	6.8	523.0	795.4	14.9	51.2	4.1
1982															

[1] Preliminary. [2] Includes generation of industrial and railway electric plants. [3] The dividing point between small and large light and power is 50 kilowatts of demand. [4] Also includes interdepartmental (averages about 600 million kwh). [5] Includes internal combustion. [6] Estimate. *Sources: Federal Power Commission; Edison Electric Institute*

Electric Power Production by Electric Utilities in the U.S.[2] In Billions of Kilowatt Hours

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1969	131.7	117.8	126.1	117.3	123.3	129.8	143.7	142.6	128.7	129.4	125.6	136.7	1,553
1970	141.1	124.7	132.3	126.5	130.5	137.2	149.7	151.5	139.8	132.7	130.9	141.0	1,638
1971	145.6	131.3	141.4	130.7	133.7	150.5	153.9	154.2	145.9	139.5	138.9	148.0	1,714
1972	153.0	145.5	148.9	140.5	146.5	154.4	166.7	171.8	155.8	152.5	152.4	163.1	1,851
1973[2]	159.3	143.1	147.8	139.3	147.0	161.0	173.5	177.0	156.3	153.8	147.8	153.3	1,861
1974	156.9	142.4	149.9	141.9	153.4	156.0	177.9	173.8	152.2	151.9	149.8	159.5	1,867
1975	164.3	147.1	155.5	146.2	153.2	162.4	176.8	179.7	155.2	154.9	152.8	169.4	1,918
1976	178.3	156.7	164.2	153.2	157.4	173.4	186.4	186.4	165.0	163.7	169.1	183.9	2,038
1977	196.4	162.7	169.1	156.9	169.3	180.8	198.9	196.1	176.2	166.4	167.1	184.2	2,124
1978	197.3	173.7	173.2	159.7	175.2	187.4	202.6	205.6	185.6	175.6	176.3	191.7	2,204
1979[1]	209.5	186.3	183.0	169.5	178.2	186.7	202.4	204.9	180.6	179.8	177.4	188.9	2,247
1980[1]	200.0	188.7	187.5	168.6	175.7	189.4	216.1	215.4	191.5	178.5	178.6	195.4	2,286
1981[1]	205.2	179.6	185.4	172.4	177.7	202.7	220.2	210.2	186.9	181.4			
1982													

[1] Preliminary. [2] Data prior to 1973 are production by UTILITIES & INDUSTRIAL ESTABLISHMENTS.
Source: Federal Power Commission

Use of Fuels for Electric Generation in the United States

	Consumption of Fuel									
Year	Coal (Thousand Short Tons)	Fuel Oil (Thousand Barrels)[2]	Gas (Million Cubic Feet)	Total Fuel in Coal Equivalent (Thousand Short Tons)	Net Generation by Fuels[3] (Million Kw. Hr.)	Lbs. of Coal Per Kw. Hr. (Pounds)	% of Total Net Fuel Generation	Average Cost of Fuel Per Kw. Hr. (¢)	Heat Rate BTU Per Kw. Hr.	Cost Per Million BTU Consumed (¢)
1969	310,641	251,027	3,487,642	517,937	1,177,127	.880	96.2	.28	10,457	27.2
1970	320,818	335,504	3,931,996	573,152	1,261,474	.909	96.4	.33	10,508	31.3
1971	327,878	396,438	3,975,972	599,766	1,307,310	.918	95.9	.40	10,536	37.5
1972	352,391	493,663	3,976,762	647,968	1,421,136	.912	95.6	.43	10,479	41.1
1973	388,190	559,842	3,640,756	688,043	1,498,958	.918	96.1	.50	10,429	48.4
1974	392,344	536,140	3,429,072	685,115	1,449,079	.946	95.6	.93	10,481	89.0
1975	406,032	506,081	3,157,591	686,236	1,441,611	.952		1.12	10,383	108.3
1976	448,431	555,583	3,080,627	740,112	1,558,951	.950		1.20	10,369	115.3
1977	477,215	623,656	3,190,571	798,425	1,648,775	.969		1.38	10,449	131.8
1978	481,624	635,829	3,188,370	811,814	1,646,163	.986		1.53	10,495	145.3
1979	527,317	523,256	3,490,517	837,371	1,708,029	.981		1.62	10,470	155.4
1980[1]	569,453	420,214	3,681,595	916,952	1,753,749	.980		2.07	10,489	197.0
1981										

[1] Preliminary. [2] 42-gallon barrels. [3] Excludes wood & waste fuels. *Source: Federal Power Commission*

Fertilizers (Nitrogen, Phosphate, and Potash)

The overall outlook for U.S. consumption of fertilizers is closely related to the overall economic picture for agriculture, and to such factors as farm production and crop prices. Continued high interest rates and tight credit, which adversely affect farm income and farm equipment sales, may also hurt domestic sales of fertilizers in 1982. United States fertilizer exports were $2.4 billion and imports $1.1 billion in 1981. U.S. strength in world fertilizer markets continues to be based on phosphates, both phosphate rock and the phosphates derived from it.

Fixed Nitrogen

The fertilizer industry produces nitrogenous, phosphatic, and potash (potassium) fertilizers. The basic nitrogen chemical is ammonia, made from natural gas and nitrogen.

Ammonia production in 1981 was estimated at 19 million tons, the same as in 1980. Three quarters of ammonia production went into fertilizer and the remainder into nonagricultural commodities such as synthetic fibers and plastics.

Supply and demand were in close balance in the United States in 1981 with U.S. plants operating at 95 percent of capacity. The value of 1981 shipments rose 2.8 percent over 1972 to $1.2 billion measured in constant 1972 dollars. Prices rose about 3 percent.

The 1981 value of nitrogenous fertilizer exports was $520 million, and of imports, $463 million. Value of exports was down from a peak of $605 million in 1980, but considerably higher than in preceding years. However, U.S. imports of ammonia in 1981 were almost five times greater than a decade ago. The relation of nitrogenous fertilizer exports to ammonia imports indicates the high degree of U.S. technological development in the processing of nitrogenous fertilizers.

The significant increase in ammonia imports stems from the low cost of natural gas in supplying countries. U.S. imports come principally from the U.S.S.R., Canada, Trinidad and Mexico. The U.S.S.R. has 35 percent, or the largest share, of estimated proven reserves of natural gas in the world. The United States and Canada together have 11 percent. The U.S.S.R. exports natural gas reserves as gas and also as feedstock for making ammonia. A substantial portion of Soviet ammonia production is traded for engineering technology and services, and for superphosphoric acid to make phosphate fertilizers suitable for their climate.

U.S. imports of ammonia from the U.S.S.R. dropped more than 30 percent in 1981, due to production problems and higher prices in Western Europe. At the same time, imports of ammonia from Mexico increased substantially over its 15 percent share in 1980. Mexican ammonia capacity is now about 3.4 million short tons, about one sixth of U.S. capacity.

The U.S. ammonia industry operated at over 95 percent of designed capacity in 1981; the average operating capacity for the rest of the world was estimated at about 70 percent. The 1981 U.S. ammonia designed capacity of about 20 million tons is about 16 percent of world designed capacity. Previously, through the 1970s, high cost ammonia plants (with obsolete technology and/or small operating capacity) began to close as the cost of domestic natural gas increased and the supply from countries with low-cost gas increased. By 1979, over 20 percent of U.S. ammonia capacity had been closed.

Phosphate Rock

Phosphoric acid, made from phosphate rock and sulfuric acid, supplies most of the phosphorus used for fertilizers. Phosphoric acid cannot itself be used as fertilizers, but is used to make solid phosphate fertilizers. In order of quantitative importance, these are: diamonium phosphate (DAP), triple super phosphate (TSP), other ammonium phosphates (AMP), and normal superphosphates (NSP).

By the end of 1981, U.S. phosphoric acid capacity (P_2O_5) was 10.8 million short tons, reflecting a compound annual growth rate of 4.2 percent since 1967. The United States had 37 percent of the world's capacity to produce phosphate rock in 1981, 36 percent of world phosphoric acid capacity, 24 percent of ammonium phosphate capacity, 18 percent of TSP capacity, and less than 8 percent of NSP capacity.

The value of U.S. phosphatic product shipments in 1981 was estimated at $1.6 billion in 1972 dollars, the same as in 1980. Reduced DAP exports, low grain prices and high interest rates, coupled with high soil phosphate levels in many areas, contributed to this relatively poor performance. In addition, phosphate prices have climbed steadily since 1972 due to increases in the cost of sulfur.

U.S. exports of phosphatic fertilizers in 1981 were about $1.7 billion, almost 12 percent below the 1980 figure, primarily because of the substantial drop in exports of DAP. Phosphate rock exports in 1981 were down about 20 percent.

U.S. exports of phosphoric acid in 1981 were estimated at 1.4 million short tons, about the same as in 1980. Phosphoric acid sales dropped in 1980/81 due to the U.S. embargo on phosphates to the U.S.S.R., but recovered by the end of 1981. The United States continues to be the dominant producer, dominant consumer, and dominant supplier to the rest of the world.

Potash

The major potassium chemical is potassium chloride or muriate of potash, popularly known as potash. Potash can be applied directly to the soil, generally as a component of an NPK mixture. Since the United States has only about 3 percent of world reserves of potash and produces about 9 percent of world supply, it must import about 75 percent of its requirements. Almost all of these imports come from Canada, the world's second largest producer. Canada has 46 percent of world resources, followed by the U.S.S.R. with 31 percent and the United States with 4 percent. The Soviets are responsible for about 31 percent of world production, and have 31 percent of world reserves. Canada produces about 25 percent of world supply and has 30 percent of world reserves. Canadian mineral quality is the best in the world and, for this reason, Canadian production costs are the lowest.

U.S. potash production in 1981 was estimated at about the same as 1980—2.4 million tons. The declining quality of U.S.-mined potash ore has caused processing costs to rise. A tight supply situation in 1980 was expected to ease by the end of 1981, partly because consumption was down as a result of soil retention of potash. U.S.D.A. forecasts a small deficiency of world potash through crop year 1982. U.S. production was expected to be constant, with consumption increasing about 2 percent per year. The supply of world potash was expected to improve considerably over the next 5 years as Canada expands its production facilities.

World Production of Ammonia In Thousands of Short Tons of Contained Nitrogen

Year	Bulgaria	Canada	China	France	E. Germany	W. Germany	India	Italy	Japan	Mexico	Netherlands	Romania	Un. Kingdom	United States	USSR	Total
1976	1.0	1.4	4.5	2.0	1.2	2.1	2.1	1.3	2.5	.8	2.2	1.8	1.5	13.9	11.1	62.7
1977	1.1	1.9	6.2	2.2	1.2	2.2	2.2	1.3	2.5	.9	2.4	2.0	1.8	14.7	11.8	68.5
1978	1.1	2.1	7.4	2.2	1.3	2.2	2.4	1.6	2.7	1.4	2.4	2.5	1.8	14.2	12.5	72.6
1979	1.0	2.2	7.9	2.4	1.2	2.4	2.5	1.6	2.7	1.5	2.5	2.6	1.8	15.3	13.4	77.3
1980[1]	1.1	2.2	8.3	2.3	1.2	2.3	2.3	1.5	2.6	1.6	2.4	2.6	1.8	15.7	13.7	78.1
1981[2]		2.3		2.4		2.3	2.4	1.6	2.6	1.6	2.4		1.8	16.5		79.5
1982																

[1] Preliminary. [2] Estimate. *Source: Bureau of Mines*

U.S. Salient Statistics of Nitrogen[1] (Ammonia) In Thousands of Short Tons

Year	Net Import Reliance as a % of Appar. Con.	Production (Fixed)	Imports Fixed	Exports (Ammonia)	Apparent Consumption			Producer Stocks		Average Price ($ Per Sh. Ton)			
					Fixed (Ammonia)	Elemental	Fixed	Natural	Fixed	Elemental (Pipeline Gas)	Elemental (Bulk Liquid)	Fixed (Ammonia)	Ammonia F.O.B. Gulf Coast
1972		12,651			584	7,011	12,333	25	1,359	7.48	41.85	60.00	51.50
1973		12,641	271	741	588	8,229	12,720	13	713	7.20	43.07	65.00	51.50
1974		13,061	373	326	411	8,814	12,987		942	9.05	48.24	142.50	75.00
1975		13,609	662	289		9,141	13,223		1,698	11.13	57.96	190.00	
1976	1	13,856	599	361		10,463	13,939		1,850	11.76	57.22	185.00	125
1977	1	14,712	884	346		11,870	14,831		2,269	11.27	56.11	130.00	90
1978	7	14,169	1,247	434		13,707	15,270		2,044	13.66	60.64	110.00	80–84
1979	8	15,329	1,603	649		14,386	16,376		1,752	14.75	65.50	130.00	128–132
1980[1]	9	15,733	1,921	681			17,236		2,100				120–125
1981[2]	8	16,500	1,960	690			18,000		2,000				134
1982													

[1] Elemental, Fixed, & Natural Nitrates. [2] Estimates. *Source: Bureau of Mines*

World Production of Phosphate Rock In Thousands of Metric[3] Tons

Year	Brazil	China	Christmas Isl.	Israel	Jordan	Morocco	Nauru Island	Senegal	South Africa	Togo	Tunisia	United States	U.S.S.R.	Vietnam	World Total
1971	220	2,400	1,092	843		13,237	2,058	1,703	1,359	1,891	3,485	38,886	20,950	300	92,508
1972	331	2,900	1,269	1,033	765	16,650	1,474	1,561	1,380	2,126	3,734	40,831	21,750	310	99,287
1973	283	3,300	1,695	860	1,191	18,824	2,561	1,931	1,505	2,527	3,829	42,137	23,400	550	108,823
1974	361	3,300	1,945	1,131	763	21,739	2,522	2,070	1,564	2,835	4,200	45,686	24,800	1,300	121,240
1975[3]	406	3,400	1,391	882	1,352	13,548	1,534	1,801	1,646	1,161	3,481	44,276	24,150	1,400	107,531
1976	490	4,000	1,033	639	1,717	15,656	755	1,799	1,731	2,008	3,301	44,671	23,900	1,500	107,594
1977	650	4,000	1,186	1,227	1,782	17,572	1,146	1,871	2,403	2,857	3,615	47,256	24,250	1,500	116,646
1978	1,023	4,500	1,400	1,725	2,303	19,713	1,999	1,759	2,699	2,827	3,712	50,037	24,962	1,800	125,885
1979	1,589	5,500	1,362	2,216	2,825	20,032	1,820	1,885	3,221	2,920	4,154	51,611	25,580	400	130,171
1980[1]	2,200	5,500	1,713	2,610	4,243	18,824	2,000	1,459	3,282	2,933	4,582	54,415	26,000	500	136,900
1981[2]				2,700	4,500	20,000		1,500	3,400	3,000	4,700	57,000			143,045
1982															

[1] Preliminary. [2] Estimate. [3] Data prior to 1975 are in THOUSANDS OF SHORT TONS. *Source: Bureau of Mines*

FERTILIZERS (NITROGEN, PHOSPHATE AND POTASH)

U.S. Salient Statistics of Phosphate Rock In Thousands of Metric Tons

Year	Mine Production	Production Marketable	Imports for Consumption	Exports	Apparent Consumption	Stocks, Dec. 31	Price—$ Avg. Per Metric Ton (f.o.b. Plant)
1972		40,831	55	14,275	29,535	10,501	5.09
1973	126,720	38,218	59	12,585	28,328	8,482	6.24
1974	141,353	41,437	165	12,605	31,491	6,975	12.10
1975	170,077	44,276	33	11,131	31,022	9,021	25.35
1976	154,278	44,662	42	9,433	31,131	13,770	21.26
1977	166,893	47,256	158	13,230	34,365	13,682	17.39
1978	173,429	50,037	908	12,870	36,812	15,081	18.56
1979	185,757	51,611	886	14,358	39,591	14,357	20.26
1980[1]	209,883	54,415	486	14,276	40,791	13,768	23.10
1981							

[1] Preliminary. *Source: Bureau of Mines*

World Production of Marketable Potash In Thousands of Metric[3] Tons (K_2O Equivalent)

Year	Canada	Chile	China	Congo (Brazz.)	France	Germany East	Germany West	Israel	Italy	Spain	U.S.S.R.	United States	United Kingdom	World Total
1972	3,852	28		310	1,941	2,709	2,698	618	238	703	5,989	2,659		22,060
1973	4,698	28		297	2,494	2,818	2,809	585	148	522	6,523	2,603		23,855
1974	6,041	14		318	2,508	3,157	2,888	669	169	436	7,260	2,552		26,432
1975	5,992	13	330	315	2,116	3,328	2,450	789	155	506	8,757	2,501	17	27,269
1976[3]	4,996	15	150	254	1,603	3,161	2,036	680	330	630	8,310	2,177	41	24,386
1977	6,089	16	150	81	1,578	3,229	2,341	719	150	563	8,347	2,229	81	25,801
1978	6,124	17	150	—	1,795	3,323	2,470	732	249	558	8,193	2,253	136	26,000
1979[1]	6,600	15	150	—	1,850	3,400	2,600	725	240	590	7,500	2,225	450	26,345
1980[2]	7,350				1,900		2,700	800	240	600		2,400	500	27,505
1981														

[1] Preliminary. [2] Estimate. [3] Data prior to 1976 are in THOUSANDS OF SHORT TONS. *Source: U.S. Bureau of Mines*

U.S. Salient Statistics of Potash In Thousands of Metric[4] Tons (K_2O Equivalent)

Year	% Net Import of Consum.	Production	Sales by Producers	Imports for Consumption	Exports	Apparent Consumption	Producer Stocks Dec. 31	Average Price[3] ¢ Per Met. Ton
1971		2,587	2,592	2,766	564	4,794	428	34
1972		2,659	2,618	2,961	764	4,815	468	34
1973		2,603	2,865	2,587	889	5,563	206	36
1974		2,552	2,545	4,326	787	6,084	212	52
1975[4]	51	2,269	1,900	3,445	707	4,638	562	84
1976	61	2,177	2,268	4,168	857	5,578	471	73
1977	63	2,229	2,232	4,605	845	5,992	467	71
1978	64	2,253	2,307	4,707	809	6,205	414	76
1979[1]	66	2,225	2,388	5,165	635	6,918	251	95
1980[2]	62	2,400		4,950	900	6,450	250	130
1981								

[1] Preliminary. [2] Estimate. [3] Unit of K_2O, standard 60% muriate f.o.b. mine. [4] Data prior to 1975 are in THOUSANDS OF SHORT TONS. *Source: Bureau of Mines*

Flaxseed and Linseed Oil

In early 1982, the USDA's Foreign Agricultural Service projected 1981/82 world flaxseed production of 2.02 million tonnes, an approximately 3 percent decrease from 1980/81 production. (The Foreign Agricultural Service uses a split year which includes Northern Hemisphere crops harvested in the late months of the first year shown combined with Southern Hemisphere crops harvested in the early months of the following year.) The USDA also projected 1981/82 total world linseed oil production of 622 thousand tonnes, vs. 643 thousand in 1980/81.

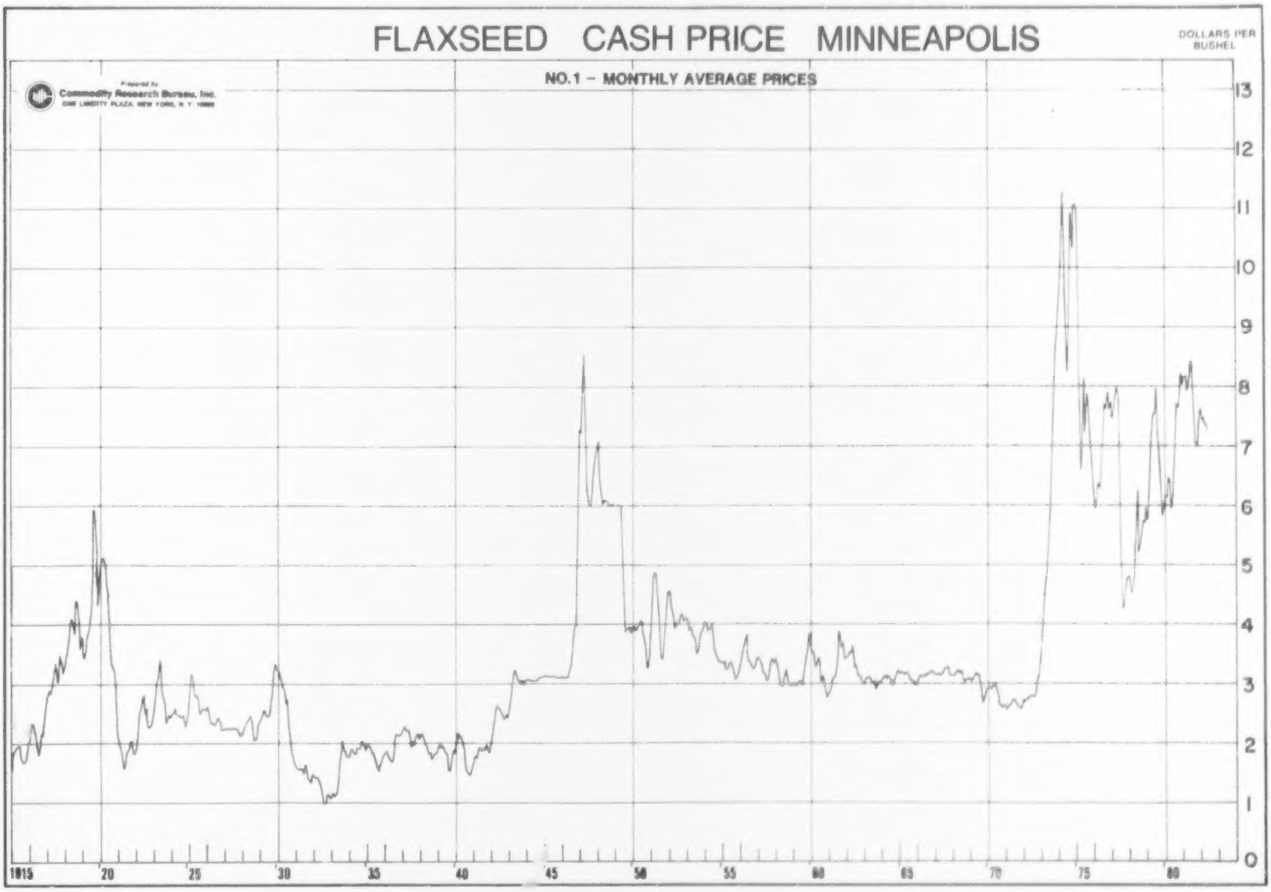
The USDA also projected that the 1981/82 linseed oil production in Argentina would total 600 thousand tonnes, vs. 585 thousand in 1980/81. The USSR and India are the next largest linseed oil producers in the world.

U.S. 1981/82 production of linseed oil was estimated at 66 thousand tonnes, about unchanged from 1980/81 production.

World Production of Flaxseed In Thousands of Metric Tons

Crop Year	Argentina	Australia	Brazil	Canada	Ethiopia	France	India	Mexico	Poland	Romania	Turkey	Uruguay	United States	U.S.S.R.	World Total
1969–0	640	37	31	700	62	20	329	10	57	38	12	105	887	451	3,499
1970–1	680	31	22	1,243	64	19	469	30	65	42	7	64	751	404	3,995
1971–2	316	10	12	567	70	21	474	40	75	58	7	43	462	464	2,748
1972–3	330	11	12	448	69	18	530	10	54	51	6	29	353	413	2,446
1973–4	297	14	12	493	72	18	428	11	51	45	6	26	409	507	2,393
1974–5	381	33	10	351	72	6	564	20	40	39	7	39	358	388	2,416
1975–6	377	13	8	445	75	32	598	27	36	45	8	62	395	340	2,564
1976–7	750	12	7	277	50	16	431	8	49	50	7	46	199	337	2,347
1977–8	855	35	5	650	50	44	527	18	38	50	6	40	409	300	2,941
1978–9	630	28	6	653	50	43	527	18	38	50	6	40	277	300	2,437
1979–0[1]	743	13		572		31	535	15	52		6	31	305	250	2,640
1980–1[2]	585	15		465		34	428	10	60			80	201	196	2,096
1981–2	600			477			400						198	200	2,079

[1] Preliminary. [2] Estimate. *Source: Foreign Agricultural Service, U.S.D.A.*



FLAXSEED AND LINSEED OIL

Production of Flaxseed in the United States In Thousands of Bushels

Year	Crop Production Estimates					By States									
	July 1	Aug. 1	Sept. 1	Oct. 1	Dec. 1	Arizona	California	Iowa	Minnesota	Montana	North Dakota	South Dakota	Texas	Wisconsin	U.S. Total
1969	30,476	34,183	35,131	36,094	36,448	—	120	19	5,820	169	18,438	9,063	1,300	—	34,929
1970	35,401	29,146	30,065	30,877	29,970	—	78	18	4,477	253	16,440	7,025	1,125	—	29,416
1971	20,212	20,814	20,011	20,011	18,653	—	—	18	3,480	64	9,041	5,525	70	—	18,198
1972	15,488	14,240	15,051	15,300	13,909	—	—	—	1,794	104	7,320	4,500	165	—	13,883
1973	—	15,431	15,904	15,904	16,437	—	—	—	3,119	56	7,576	5,577	80	—	16,408
1974	—	13,713	14,263	14,543	13,337	—	—	—	3,163	40	6,688	3,818	374	—	14,083
1975	—	16,272	16,140	15,746	14,557	—	—	—	2,875	38	7,700	4,460	480	—	15,553
1976	—	6,776	6,967	6,951	7,356	—	—	—	1,950	50	4,000	1,380	440	—	7,580
1977	—	15,466	16,011	16,249	16,105	—	—	—	3,190	35	7,500	4,290	90	—	14,280
1978	—	11,156	11,348	11,705	10,921	—	—	—	2,201	—	4,025	2,188	200	—	8,614
1979	—	11,847	12,501	13,255	13,539	—	—	—	2,219	—	5,980	3,770	45	—	12,014
1980	—	7,060	7,700	7,940	8,128	—	—	—	1,563	—	2,900	3,445	20	—	7,928
1981[1]	—	8,083	8,083	7,893	7,799	—	—	—	1,300	—	4,250	2,249	—	—	7,799
1982															

[1] Preliminary, December estimate. *Source: Crop Reporting Board, U.S.D.A.*

U.S. Supply and Distribution of Flaxseed In Thousands of Bushels

Year Beginning June	Supply							Distribution				
	Stocks, June 1											
	Farm	Terminal	All Other	Total Stocks[4]	Imports	Production	Total Supply	Seed	Crushing	Exports	Other[2]	Total Distribution
1969–0	2,085	7,706		11,622	0	34,929	46,551	2,265	14,289	6,505	452	23,511
1970–1	4,481	17,343		23,040	1	29,416	52,457	1,262	18,155	3,220	922	23,559
1971–2	3,174	23,605		28,898	74	18,198	47,170	933	21,022	910	1,102	23,967
1972–3	2,502	17,630		23,203	3	13,883	37,089	1,398	19,932	9,881	393	31,604
1973–4	403	3,103		5,485	399	16,408	22,292	1,360	17,203	630	—953	18,240
1974–5	658	1,885		4,052	130	14,083	18,265	1,231	13,386	372	245	15,234
1975–6	1,120	1,100		3,031	148	15,553	18,732	1,054	11,791	953	44	13,842
1976–7	1,830	3,060		4,890	2,168	7,580	14,638	1,043	10,677	196	−239	11,667
1977–8	1,070	1,934		2,961	859	14,280	18,100	557	11,615	1,001	−388	12,785
1978–9	2,890	2,606		5,315	1,557	8,614	15,486	724	13,009	91	−924	12,900
1979–0	977	1,609		2,586	1,916	12,014	16,516	650	12,425	174	—1,751	11,498
1980–1[1]	2,681	2,337		5,018	2,510	7,928	15,456	547	11,927	76	22	12,572
1981–2[3]	1,178	1,597		2,775	3,984	7,799	14,667	622	11,500	45	0	12,167
1982–3												

[1] Preliminary. [2] Other disappearance represents cleaning loss, waste, and residual. [3] Forecasts. [4] Estimates prior to 1975. Derived from July 1 stocks by adding June crushings & exports. *Source: Statistical Reporting Service, U.S.D.A.*

Average Price Received by Farmers for Flaxseed in the U.S. In Cents Per Bushel

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Average[1]
1969–0	273	266	257	264	261	264	264	262	264	266	250	259	265
1970–1	256	246	236	231	232	233	231	233	234	238	237	238	240
1971–2	234	234	231	225	227	237	241	242	244	249	249	250	238
1972–3	249	255	269	276	281	313	351	415	438	439	444	548	310
1973–4	572	675	729	766	810	863	936	1010	1080	927	883	776	756
1974–5	860	1080	977	1050	1060	1050	863	776	647	678	711	664	966
1975–6	755	722	682	666	560	570	537	587	574	588	554	669	657
1976–7	720	704	748	708	726	700	704	720	742	752	722	637	708
1977–8	514	415	420	456	420	432	421	407	441	485	532	589	454
1978–9	524	534	531	525	539	530	567	601	648	706	737	727	574
1979–0	690	642	634	556	544	561	551	579	585	551	604	588	597
1980–1	655	702	717	710	723	759	754	748	725	735	765	747	727
1981–2	723	708	644	621	664	684	690	691	680	668			
1982–3													

[1] Season average includes an allowance for unredeemed loans. *Source: Crop Reporting Board, U.S.D.A.*

Flaxseed Stocks in the United States In Thousands of Bushels

Year	On Farms				Off Farms				Total Stocks			
	Jan. 1	Apr. 1	June 1	Oct. 1	Jan. 1	Apr. 1	June 1	Oct. 1	Jan. 1	Apr. 1	June 1	Oct. 1
1975	3,946	2,668	N.A.	7,552	3,745	1,907	N.A.	6,228	7,691	4,575	3,031	13,780
1976	4,220	3,009	1,830	4,116	5,533	4,164	3,060	4,971	9,753	7,173	4,890	9,087
1977	2,853	2,070	1,070	9,292	4,375	2,879	1,934	4,307	7,228	4,949	3,004	13,599
1978	5,773	4,499	2,890	6,170	5,168	3,905	2,606	3,390	10,941	8,404	5,496	9,560
1979	3,446	2,349	977	7,449	4,027	3,039	1,609	2,999	7,473	5,388	2,586	10,448
1980	4,909	3,967	2,681	5,583	4,723	3,249	2,337	3,200	9,632	7,216	5,018	8,583
1981[1]	3,132	2,086	1,178	4,575	3,423	2,252	1,597	1,902	6,555	4,338	2,775	6,477
1982[1]	3,232	2,035			1,864	1,521			5,096	3,556		

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

Average Price of No. 1 Flaxseed at Minneapolis In Dollars Per Bushel

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Average[1]
1969–0	2.88	2.69	2.77	2.90	2.92	2.94	2.90	2.92	2.97	2.97	2.89	2.83	2.90
1970–1	2.65	2.64	2.60	2.62	2.63	2.58	2.62	2.63	2.71	2.72	2.70	2.68	2.66
1971–2	2.62	2.61	2.58	2.64	2.71	2.70	2.74	2.74	2.78	2.80	2.80	2.79	2.69
1972–3	2.85	3.00	3.08	3.14	3.41	3.90	4.52	4.75	4.84	5.12	5.93	6.37	3.94
1973–4	7.36	7.89	8.71	8.82	9.22	10.06	10.67	11.29	9.87	8.67	8.26	9.25	8.93
1974–5	10.92	10.33	11.04	11.08	10.97	8.76	7.70	6.60	7.39	8.15	7.23	7.88	9.12
1975–6	7.69	7.25	6.64	6.18	6.09	5.93	6.36	6.30	6.40	6.67	7.31	7.70	6.71
1976–7	7.63	7.91	7.61	7.71	7.46	7.54	7.63	7.82	7.99	7.76	6.10	5.17	7.36
1977–8	4.26	4.41	4.79	—	4.80	4.61	4.51	4.78	5.30	5.78	6.25	5.22	4.97
1978–9	5.47	5.76	5.70	5.99	5.75	6.17	6.63	7.22	7.54	7.51	7.98	7.23	6.58
1979–0	7.00	6.71	6.12	5.84	6.16	6.14	6.47	6.44	5.95	6.24	6.50	7.15	6.39
1980–1	7.70	7.65	7.82	8.23	8.04	8.17	8.19	7.93	8.11	8.42	8.06	7.85	8.01
1981–2	7.60	7.02	7.00	7.41	7.61	7.51	7.57	7.47	7.35				
1982–3													

[1] Weighted average by carlot sales. *Source: Economic Research Service, U.S.D.A.*

Supply and Distribution of Linseed Oil in the United States In Millions of Pounds

Year Beginning June	Supply			Exports & Shipments	Domestic Disappearance								Per Capita Lbs.	Flaxseed (Oil Equivalent of Exports)[3]
					Drying Oil Products									
	Stocks June 1	Production	Total		Paint & Varnish	Linoleum & Oilcloth	Resins & Plastics	Other Inedible	Total	Lubricants & Similar Oils	Fatty Acids	Total		
1969–0	152	290	442	40	220	13	19	18	239	12	2	272	1.33	131
1970–1	130	363	495	47	209	8	19	19	239	13	1	261	1.26	64
1971–2	187	428	615	66	221	7	21	16	258	13	3	274	1.31	18
1972–3	275	393	668	256	224	11	25	21	270	14	—	285	1.35	200
1973–4	127	344	471	142	205	11	21	22	248	10	—	259	1.22	13
1974–5	71	263	334	143	112	3	11	12	134	8	—	142	.66	7
1975–6	49	231	279	42	154	—	10	9	173	10	4	187	.87	19
1976–7	49	217	266	14	126		13	8	156	9	8	164	.75	4
1977–8[1]	88	269	320	25	177		23	15		7	3	225	1.03	20
1978–9[2]	70	163	330	54										
1979–0[2]	44	225												
1980–1[2]		148												
1981–2[2]		146												

[1] Preliminary. [2] Estimate. [3] Based on 20 lbs. of linseed oil per bushel of flaxseed exports.
Source: Economic Research Service, U.S.D.A.

FLAXSEED AND LINSEED OIL

Wholesale Price of Raw Linseed Oil at Minneapolis in Tank Cars In Cents Per Pound

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Average
1969-0	11.9	11.9	11.9	12.5	12.5	12.5	12.5	N.A.	11.0	11.0	12.2	12.2	11.9
1970-1	11.0	11.0	10.0	10.0	10.0	9.5	9.5	9.5	9.0	8.8	8.8	8.8	9.7
1971-2	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	9.5	8.9
1972-3	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	14.0	14.2	10.3
1973-4	12.0	N.A.	N.A.	N.A.	—	35.0	35.0	40.2	42.6	45.0	45.0	44.5	37.8
1974-5	44.6	44.0	47.0	48.5	48.5	48.5	46.2	44.0	44.0	44.0	44.0	44.0	45.6
1975-6	44.5	39.0	36.0	35.0	30.5	29.8	28.3	27.5	25.5	24.0	24.0	24.0	30.6
1976-7	25.4	27.5	27.8	30.0	30.0	30.0	30.0	30.0	28.0	28.5	28.5	28.5	28.6
1977-8	28.0	28.5	27.0	22.8	20.0	20.0	26.6	26.6	26.6	—	22.0	22.0	24.5
1978-9	22.5	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	30.0	30.0	24.9
1979-0	30.0	30.0	32.0	32.0	32.0	32.0	32.0	28.8	28.8	27.8	26.6	27.0	29.9
1980-1	27.0	28.6	29.0	29.2	29.0	29.8	32.8	32.0	31.3	32.0	32.6	32.8	30.5
1981-2	32.8	32.3	31.8	30.8	30.0	27.6	29.5	28.5	28.2				
1982-3													

Source: Department of Agriculture

Linseed Oil Production (Crude, Raw) In Millions of Pounds

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total
1960-0	12.8	16.1	39.5	31.2	26.7	19.5	23.0	24.2	21.4	27.1	26.8	24.2	292.5
1970-1	17.5	29.1	36.2	30.7	26.8	27.5	31.9	32.4	34.9	36.7	36.8	41.4	381.9
1971-2	25.9	34.7	35.4	36.5	32.3	33.3	38.2	36.5	44.8	36.1	33.2	39.0	425.9
1972-3	33.2	40.4	41.1	34.0	35.0	28.2	31.3	25.1	26.5	28.5	30.2	39.9	393.4
1973-4	29.6	33.4	39.1	40.6	28.2	22.3	24.2	19.6	20.1	20.0	27.1	30.6	335.0
1974-5	24.8	14.6	29.2	36.5	32.2	29.8	16.5	14.2	13.9	9.5	10.9	15.2	247.3
1975-6	6.5	18.4	31.8	37.6	19.2	14.6	11.7	17.9	19.0	17.4	20.6	19.7	229.7
1976-7	21.8	16.4	21.0	20.6	12.5	22.7	19.3	14.0	14.7	13.0	20.9	21.2	216.5
1977-8	13.0	22.9	26.9	15.5	13.5	18.8	19.5	14.6	6.9	22.8	35.9	30.9	231.4
1978-9	32.4	20.3	18.4	N.A.	16.9	14.6	16.1	N.A.	23.7	28.3	26.2	26.1	223.0
1979-0	16.4	22.5	41.9	11.5	15.7	12.2	N.A.	N.A.	29.3	30.7	14.8	19.3	214.3
1980-1	14.5	19.3	N.A.	17.1	29.5	N.A.	N.A.	N.A.	N.A.	N.A.	23.3	22.7	—
1981-2[1]	24.2	30.9	38.8	N.A.	21.6								
1982-3													

[1] Preliminary. *Source: Bureau of the Census*

U.S. Linseed Oil Domestic Disappearance In Millions of Pounds

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total
1969-0	17.0	17.0	16.2	17.1	13.8	13.9	13.6	15.0	14.6	16.7	17.1	18.6	190.6
1970-1	18.6	18.4	16.8	15.1	14.2	12.7	13.3	15.8	18.4	19.6	19.6	22.7	205.2
1971-2	17.9	19.4	18.0	17.6	15.3	16.0	17.3	17.6	19.0	19.7	22.5	24.3	224.6
1972-3	21.9	23.2	20.9	21.7	18.5	17.1	37.8	11.2	37.0	38.6	45.9	34.7	293.4
1973-4	25.4	30.1	9.9	31.8	19.4	12.0	31.2	14.3	15.8	15.7	18.6	30.3	254.5
1974-5	.5	9.5	37.3	10.2	16.8	2.5	9.1	11.4	13.0	9.5	5.9	16.6	128.6
1975-6	12.6	22.6	20.4	22.8	8.5	12.8	22.4	15.4	15.2	9.6	23.1	15.3	187.2
1976-7	22.2	11.1	15.3	15.8	8.6	12.0	14.7	15.9	20.1	6.8	20.9	21.9	163.5
1977-8	23.9	22.9	13.7	10.9	8.9	3.8	15.4	15.8	23.9	21.2	42.5	21.5	224.7
1978-9	6.1	31.5	14.0	22.3	16.1	11.4	16.2	15.0	14.7	21.7	20.5	18.3	267.9
1979-0	18.4	19.9	15.8	24.3	14.9	11.4	11.7	12.3	14.6	17.1	11.6	12.2	184.2
1980-1	13.2	15.7	16.7	21.1	11.4	11.6	13.6	13.9	12.2	19.8	15.4	12.9	177.5
1981-2[1]	21.0	16.0	15.3	15.2	6.3	5.6	6.5	7.6					
1982-3													

[1] Preliminary. *Source: Bureau of the Census*

High, Low & Closing Prices of May Flaxseed Futures in Winnipeg In Dollars per Tonne

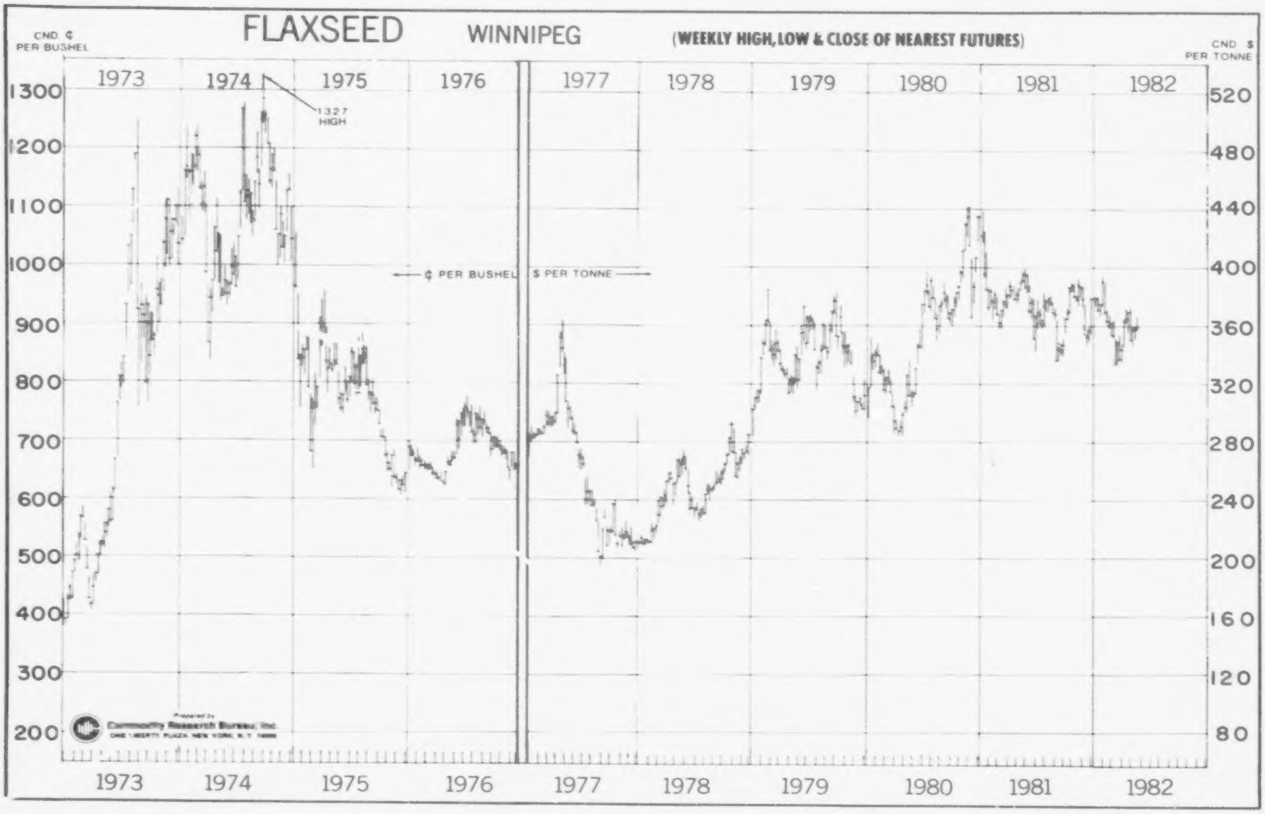
Year of Delivery		Year Prior to Delivery							Delivery Year					Life of Delivery Range
		June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	
1978	High	—	263.60	247.50	242.90	247.00	230.50	229.00	217.00	221.00	246.50	261.00	271.30	271.30
	Low	—	246.00	200.50	216.40	214.90	215.00	210.50	208.70	211.00	217.40	236.00	243.00	200.50
	Close	—	251.10	218.00	227.00	221.70	218.40	210.50	210.60	216.60	242.50	250.80	271.30	—
1979	High	246.10	243.50	255.50	262.50	285.00	284.00	288.00	325.50	385.00	357.00	344.40	346.00	385.00
	Low	243.10	233.00	234.80	249.60	256.00	260.50	271.50	284.00	326.50	332.60	321.00	313.00	233.00
	Close	243.10	243.50	251.10	256.50	279.00	273.00	284.60	325.00	351.50	343.00	322.00	336.00	—
1980	High	356.50	345.50	354.00	355.00	356.40	341.50	332.00	351.50	347.50	330.30	295.50	336.00	356.50
	Low	302.00	312.50	316.50	325.00	315.50	319.30	317.00	297.00	315.00	295.50	284.00	292.00	284.00
	Close	333.00	319.50	351.70	348.00	319.00	330.70	318.00	337.60	316.00	296.20	293.00	307.60	—
1981	High	370.50	412.70	406.00	412.70	417.50	468.90	470.50	439.10	385.80	387.30	391.40	397.00	470.50
	Low	327.50	365.00	367.00	391.50	387.00	413.00	395.70	371.00	364.00	358.00	376.30	376.70	327.50
	Close	360.60	405.50	393.00	395.80	411.90	468.00	431.10	373.00	368.20	378.40	382.70	389.50	—
1982	High	413.00	410.00	406.20	403.20	426.20	424.50	412.90	393.50	388.50	364.00	372.50		
	Low	385.00	391.00	392.50	376.70	392.00	404.60	367.50	367.30	352.70	332.50	340.50		
	Close	393.00	396.00	399.60	397.00	422.50	414.50	378.50	390.10	361.50	343.70	350.00		

Source: Winnipeg Commodity Exchange

Month End Open Interest of Flaxseed Futures in Winnipeg In 20 Tonne Units

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	3,250	3,820	4,293	5,229	5,964	5,576	4,671	5,460	5,019	5,999	5,551	5,596
1979	5,998	6,537	6,656	5,827	5,256	4,411	7,185	6,219	5,845	6,517	5,831	7,860
1980	8,319	9,117	8,790	9,210	8,059	7,460	9,606	10,414	8,728	9,656	10,455	11,786
1981	10,923	10,483	9,237	8,210	6,381	8,039	8,988	9,101	4,807	5,216	5,580	5,064
1982	6,339	7,201	7,714	7,214								

Source: Winnipeg Commodity Exchange



U.S. Stocks of Linseed Oil (Crude & Refined) at Factories & Warehouses In Millions of Pounds

Year	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1	Jan. 1	Feb. 1	Mar. 1	April 1	May 1	June 1
1969–0	131.4	121.3	113.1	118.8	130.7	132.0	128.8	129.0	132.6	130.4	133.9	130.4
1970–1	128.7	112.8	117.1	130.0	134.9	144.9	148.5	157.5	170.5	180.7	192.8	187.2
1971–2	203.8	193.2	177.1	179.9	203.7	210.8	224.9	236.7	245.3	263.5	280.9	275.3
1972–3	276.6	263.8	253.3	259.2	258.4	246.3	253.6	225.3	224.1	177.3	153.0	127.1
1973–4	113.0	86.4	71.6	90.3	85.8	86.3	82.2	70.1	64.7	65.3	66.4	70.8
1974–5	59.2	69.4	60.2	48.2	58.9	47.6	71.5	69.2	67.0	56.0	49.8	48.6
1975–6	43.8	36.7	30.1	37.8	49.5	47.6	55.8	44.1	44.0	46.3	51.7	48.9
1976–7	47.6	42.7	48.0	53.5	58.1	59.7	70.2	89.9	87.8	82.3	88.4	88.1
1977–8	87.3	74.0	69.0	79.2	72.6	74.2	89.2	93.2	92.0	74.8	76.3	69.6
1978–9	62.6	75.6	49.9	44.8	34.4	34.8	34.9	34.8	35.5	37.4	43.6	43.9
1979–0	49.1	39.9	47.7	62.9	46.4	43.6	35.6	41.8	36.3	48.2	65.6	53.5
1980–1[1]	42.9	45.3	35.5	52.5	43.8	34.5	45.6	50.6	53.3	34.7	42.1	56.3
1981–2[1]	67.1	57.4	65.7	71.4	72.0	64.2	57.2	62.7	57.2			
1982–3												

[1] Preliminary. *Source: Bureau of the Census*

Factory Shipments of Paints, Varnish and Lacquer in the U.S. In Millions of Dollars

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1970	179.0	197.6	241.2	236.0	251.8	281.1	255.8	254.7	256.4	220.6	185.9	177.0	2,737
1971	180.4	198.2	235.6	253.0	258.2	291.6	254.1	274.0	266.8	226.8	208.9	183.3	2,831
1972	209.6	226.0	261.0	252.7	285.8	292.4	257.6	286.4	269.0	254.0	224.7	190.0	3,009
1973	220.2	229.2	257.2	268.9	294.4	297.5	279.4	301.7	272.5	274.3	240.0	197.8	3,133
1974	243.8	246.3	279.5	315.9	342.3	349.5	345.5	363.8	338.8	343.2	280.4	223.3	3,672
1975	265.0	267.5	302.2	334.1	362.9	391.6	373.4	387.1	384.6	364.0	318.2	276.0	4,027
1976	305.0	353.1	396.2	419.1	434.0	477.3	423.6	455.4	420.7	355.3	357.1	322.8	4,720
1977	329.8	354.2	466.2	449.5	508.5	527.0	465.0	521.1	482.2	435.5	409.2	359.7	5,308
1978[2]	377.1	403.7	500.6	517.1	589.0	586.2	518.4	589.0	536.0	516.6	470.2	403.3	6,008
1979[1]	476.1	484.0	622.0	574.1	677.8	668.3	638.4	678.4	590.3	648.5	526.8	448.1	7,025
1980[1]	540.8	567.9	611.9	648.0	702.4	721.6	682.9	689.3	698.2	706.1	546.4	520.3	7,636
1981[1]	555.1	593.2	728.1	774.5	770.8	851.8	774.4	784.8	773.2	704.2	578.3		
1982													

[1] Preliminary. [2] New series; not comparable with earlier data. *Source: Bureau of the Census*

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Gas

Marketed production of domestic natural gas in 1981 totaled 20,368.0 billion cubic feet (bcf), which represented a minor decrease from the 1981 output of 20,379.0 bcf.

Consumption of natural and supplemental gas in the United States during January 1982 was an estimated 2.4 trillion cubic feet (tcf). This was 13.3 percent higher than in December 1981 and 7.4 percent more than in January 1981. Imports of natural gas in January 1982 were an estimated 95 billion cubic feet (bcf), 10.5 percent more than in the previous January. Receipts of foreign gas in January 1982 included Algerian liquefied natural gas (LNG) equivalent to approximately 3 bcf.

According to the Department of Energy (DOE), the total quantity of natural gas in U.S. storage facilities as of December 31, 1981 stood at 6,561 bcf, of which 3,748 bcf was base gas and 2,179 bcf was working gas. This compares with 6,272 bcf of total gas of which 3,629 bcf was base gas and 2,643 bcf was working gas, as of December 31, 1980. Base gas is the volume of gas needed as a permanent inventory to maintain adequate reservoir pressure and deliverable rates throughout the withdrawal season. The withdrawal season is the period when storage withdrawals are greater than storage injections, and typically runs from October to February or March. Working gas is the difference between total gas and base gas, and thus is available for withdrawal.

Domestic producer sales of natural gas in the first eleven months of 1981 to major interstate pipeline companies were estimated by the DOE at 9,889 bcf, up 2.6 percent from the same period in 1980.

U.S. imports of natural gas during 1981 were estimated by the DOE at 877 bcf vs. 985 bcf in 1980.

Resource Development

The average monthly number of rotary rigs in operation in 1981 was 3,970, compared with the 1980 average of 2,909. Moreover, the December 1981 rotary rig count of 4,520 represented a record high. It was followed by a slight decline—January, 1982 rotary rig count was 4,436. In 1981, a total of 17,870 gas well completions was reported, compared with 15,730 in 1980.

Prices

Natural gas prices continued their upward movement in 1981. According to Department of Energy data, average wellhead prices rose from 160.3 cents per thousand cubic feet in 1980 to 206.3 cents per thousand cubic feet in 1981.

World Natural Gas Production (Marketed Production[3]) In Billions of Cubic Feet

Year	Argentina	Canada	France	Germany East	Germany West	Iran	Italy	Mexico	Netherlands	Poland	Romania	United Kingdom	United States	USSR	Venezuela	Total
1970	212	2,277	243	14	460	71	465	481	1,107	183	884	398	21,921	6,990	349	37,590
1971	228	2,499	252	101	555	299	473	479	1,536	190	892	657	22,493	7,501	368	40,282
1972	218	2,914	260	179	637	448	501	496	2,052	206	976	939	22,532	7,818	388	43,525
1973	238	3,119	262	248	706	702	541	542	2,495	213	980	1,018	22,648	8,346	460	46,144
1974	256	3,046	269	273	713	786	540	561	2,957	203	1,012	1,230	21,601	9,201	476	46,229
1975	278	3,090	260	257	639	771	514	584	3,208	211	1,042	1,274	20,109	10,206	450	46,358
1976	291	3,097	250	305	658	759	553	578	3,436	237	1,136	1,316	19,952	11,334	480	48,306
1977	304	3,231	272	300	638	741	485	600	3,422	258	1,103	1,444	20,025	12,219	524	50,100
1978[1]	297	3,128	278	302	707	687	485	745	3,133	282	1,112	1,384	19,974	13,137	520	51,749
1979[2]													20,471			
1980[2]													20,145			

[1] Preliminary. [2] Estimate. [3] Comprises all gas collected & utilized as fuel or as a chemical industry raw material, including gas used in oilfields and/or gasfields as a fuel by producers. *Source: U.S. Dept. of Energy*

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Salient Statistics of Natural Gas in the United States

	In Billions of Cubic Feet										Value		Avg. Value Delivered to Consumers—$ Ths. Cu. Ft.		
	Supply				Disposition										
Year	Marketed Production	Withdrawals[4]	Imports (Consumed) (Bil. Nat. Gas Cu. Ft.)	Total Supply	Consumption	Exports	Stored	Extraction Loss	Adjustments	Total Disposition	At Wells[3] Million $	¢ Ths. cu. ft. At Wells	Residential	Commercial	Electric Utilities
1969	20,698	1,379	727	22,805	20,923	51	1,499		332	22,805	3,456	16.7			
1970	21,921	1,459	821	24,200	20,046	70	1,857		228	24,200	3,746	17.1	1.09	.82	.29
1971	22,493	1,508	935	24,935	22,677	80	1,839		339	24,935	4,085	18.2	1.15	.87	.32
1972	22,532	1,757	1,019	25,308	23,009	78	1,893		328	25,308	4,180	18.6	1.21	.92	.34
1973	22,648	1,533	1,033	25,213	22,966	77	1,974		196	25,213	4,894	21.6	1.29	.98	.38
1974	21,601	1,701	959	24,260	21,223	77	1,784	887	289	24,260	6,573	30.4	1.46	1.12	.51
1975	20,109	1,760	953	22,821	19,538	73	2,104	872	235	22,821	8,945	44.5	1.71	1.40	.77
1976	19,952	1,921	964	22,837	19,946	65	1,756	854	216	22,837	11,572	58.0	1.98	1.69	.98
1977	20,025	1,750	1,011	22,786	19,521	56	2,307	863	41	22,786	15,834	79.0	2.35	2.10	1.32
1978	19,974	2,158	966	23,097	19,627	53	2,278	852	287	23,097	18,085	90.5	2.56	2.30	1.48
1979[1]	20,471	2,041	1,253	23,765	20,241	56	2,295	808	372	23,772	24,114	117.8	2.98	2.77	1.81
1980[2]	20,379	2,081	985	23,445	19,877	49									
1981[2]	20,197	1,907	877	22,981	19,263	50									
1982															

[1] Preliminary. [2] Estimate. [3] Total value of market production at the wellhead. [4] Withdrawals from underground storage. *Source: U.S. Dept. of Energy*

Natural Gas Consumed[2] in the United States In Billions of Cubic Feet

Year	Arkansas	California	Illinois	Kansas	Louisiana	Michigan	Missouri	New Mexico	New York	Ohio	Oklahoma	Pennsylvania	Texas	West Virginia	Indiana
1969	353	2,079	1,099	583	1,942	779	399	302	684	1,032	603	766	4,325	178	
1970	385	2,156	1,188	615	2,034	811	430	323	711	1,053	656	772	4,559	192	
1971	336	2,177	1,243	647	2,079	853	429	323	717	1,087	667	802	4,813	189	
1972	318	2,210	1,221	669	2,138	867	425	342	693	1,148	686	829	4,883	209	
1973	329	2,063	1,164	648	2,217	922	427	313	683	1,104	673	783	5,088	196	
1974	291	1,852	1,163	630	2,203	938	410	312	627	1,087	723	716	4,912	192	
1975	259	1,858	1,108	541	1,978	887	370	296	577	957	729	654	4,380	168	
1976	250	1,771	1,188	556	2,216	895	380	341	596	1,006	812	714	4,404	159	425
1977	230	1,772	1,167	507	2,191	741	367	230	562	847	767	668	4,143	145	398
1978	221	1,563	1,175	519	2,249	790	359	214	570	930	770	674	4,211	152	441
1979[1]	251	1,810	1,143	584	1,978	876	347	211	624	898	825	741	4,001	149	504
1980															

[1] Preliminary. [2] Includes volume of natural gas which is distributed as a component of mixed gas. *Source: U.S. Dept. of Energy*

United States Marketed Production[1] of Natural Gas In Billions of Cubic Feet

Year	Arkansas	California	Kansas	Alaska	Louisiana	Mississippi	Montana	New Mexico	Ohio	Oklahoma	Pennsylvania	Texas	West Virginia	Wyoming	Michigan
1969	169	678	883	81	7,228	131	41	1,138	50	1,524	79	7,853	232	304	
1970	181	649	900	78	7,788	126	43	1,139	52	1,595	77	8,358	242	339	
1971	172	613	885	73	8,082	119	33	1,168	80	1,684	76	8,551	234	380	
1972	167	487	889	126	7,973	104	33	1,216	90	1,807	74	8,658	215	375	
1973	158	449	893	131	8,242	100	56	1,219	94	1,771	79	8,514	209	358	
1974	124	365	887	129	7,754	79	55	1,245	92	1,639	83	8,171	202	327	
1975	116	318	844	160	7,091	70	41	1,217	85	1,605	85	7,486	154	316	102
1976	110	354	829	166	7,007	71	43	1,231	89	1,727	89	7,192	153	329	119
1977	104	311	781	188	7,215	83	47	1,203	99	1,770	92	7,051	153	330	130
1978	107	311	854	203	7,476	107	47	1,174	114	1,774	98	6,548	149	357	148
1979	109	248	798	221	7,266	144	54	1,181	123	1,835	96	7,175	151	414	160
1980[2]	112	264	732	226	6,937	165	54	1,142		1,892		7,169	152	382	153
1981															

[1] Comprises gas either sold or consumed by producers, including losses in transmission, quantities added to storage and increases of gas in pipelines. [2] Preliminary. *Source: U.S. Dept. of Energy*

United States Recoverable Reserves and Deliveries of Natural Gas In Billions of Cubic Feet

Year	Recoverable Reserves of Natural Gas Dec. 31[3]	Residential	Commercial	Industrial Deliveries							Electric Utility Power[2] Plants
		Deliveries		Field	Carbon Black	Petroleum Refineries	Used as Pipeline Fuel	Industrial	Other Consumers	Total Deliveries	
1969	275,109	4,728	1,955	2,212	98	998	631	6,814			3,486
1970	290,700	4,837	2,057	2,305	86	1,029	722	7,116			3,894
1971	278,806	4,972	2,173	2,297	59	1,063	743	7,373			3,993
1972	266,085	5,144	2,279	2,364	59	1,071	766	7,364			3,979
1973	249,950	4,994	2,283	2,412	50	1,074	728	7,929			3,605
1974	237,132	4,786	2,263		40	1,040	669				3,429
1975	228,200	4,924	2,268		26	946	583				3,147
1976	216,026	5,051	2,383		28	919	548	6,967	285	17,764	3,078
1977[1]	208,878	4,821	2,243		28		533	6,817	257	17,329	3,189
1978[1]	200,302	4,903	2,310				530	6,757	291	17,449	3,188
1979[4]	194,600	4,965	2,485				601	6,899	301	18,141	3,491
1980											

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[1] Preliminary. [2] Figures include gas other than natural (impossible to segregate); therefore, shown separately from other consumption. [3] Estimated proved recoverable reserves. [4] Estimated. *Source: U.S. Dept. of Energy*

Total Sales of All Types[2] of Gas To All Consumers in the United States In Millions of Therms

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1969	17,844	16,400	16,368	13,753	11,240	10,089	9,882	9,545	9,466	10,306	12,899	16,105	153,897
1970	18,658	17,330	16,630	15,277	12,257	10,543	10,135	10,202	10,075	10,811	12,837	15,664	160,419
1971	18,868	18,735	17,690	15,586	13,117	11,447	10,528	10,369	10,232	11,004	13,052	16,179	166,795
1972	18,331	19,081	17,591	15,451	13,006	11,735	10,578	11,277	10,963	11,218	13,809	17,991	171,082
1973	19,094	17,528	16,453	15,001	13,321	11,438	11,048	10,690	10,631	11,365	13,067	15,163	164,799
1974	18,476	17,072	16,307	14,936	12,516	11,199	10,508	10,349	9,923	11,152	12,198	15,367	160,003
1975	17,095	16,336	15,884	14,553	11,208	9,448	9,247	9,348	9,354	10,092	11,028	15,036	148,629
1976	17,975	16,446	14,510	12,252	10,998	9,656	9.131	9,008	8,991	9,964	12,783	16,147	148,135
1977	19,019	16,827	14,257	11,684	9,748	9,045	8,758	8,665	8,607	9,767	11,535	15,498	143,409
1978[1]	17,798	18,194	15.989	12,420	10,364	9,105	8,213	8,090	8,086	9,204	11,531	15,503	144,497
1979[1]	19,251	19,238	16,305	13,563	10,746	9,394	9,037	9,209	8,913	10,389	12,534	15,870	154,404
1980[1]	18,279	19,156	17,873	13,734	10,697	9,416	8.838	8,942	8,840	10,047	12,785	16,677	155,284
1981													

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[1] Preliminary. [2] Natural, Manufactured and Mixed Gas. *Source: American Gas Association*

Gas Utility Sales in the United States by Types & Class of Service In Millions of Therms

Year	Total Utility Sales	Type of Gas			No. of Cust. (Mil.)	Class of Service				Revenue—Mil. $			
		Natural	Mfg.	Mixed		Residential	Commercial	Industrial	Other	Residential	Commercial	Industrial	Other
1969	153,916	152,374		1,536	40.9	48,204	18,781	81,358	5,573	4,883	1,459	2,919	219
1970	160,435	160,930		1,482	41.5	49,237	20,006	84,392	6,740	5,207	1,620	3,181	274
1971	166,857				42.2	50,401	21,555	86,455	8,447	5,635	1,829	3,569	324
1972	170,821				43.0	51,418	22,757	87,757	8,880	6,094	2,064	3,943	364
1973	164,799				43.7	49,936	22,808	83,708	8,347	6,247	2,172	4,197	371
1974	160,003				44.3	48,648	22,934	81,532	6,890	6,899	2,539	5,391	413
1975	148,629				44.6	49,910	23,868	68,371	6,480	8,445	3,303	6,718	608
1976	148,135				44.9	50,142	24,226	71,070	2,696	9,941	4,075	9,374	311
1977	143,409				45.7	49,463	24,094	67,107	2,746	11,541	4,980	11,385	397
1978	147,480				46.0	51,070	25,000	68,410	3,010	12,939	5,696	13,065	451
1979[1]	154,400				46.7	50,830	24,860	75,550	3,160	14,833	6,624	16,961	530
1980[2]	153,310				47.4	48,700	23,980	77,820	2,800	17,188	7,914	21,551	578
1981													

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[1] Preliminary. [2] Estimate. *Source: American Gas Association*

Glass

Demand for flat glass in 1981 was aided by continued strength in the commercial construction and export markets which slightly more than offset the decline in demand from residential construction.

Flat glass shipments in 1982 were expected to improve further at a gradual rate, with most of the improvement coming during the second half of the year. An anticipated drop in interest rates was expected to help both the automobile and the residential construction industries. Demand for glass from the automotive industry was expected to show the best improvement, up over 10 percent. Residential housing starts were expected to increase about 5 percent.

Unit shipments of glass containers declined fractionally in 1981, to 325 million gross or about 0.3 percent below 1980. The value of shipments, adjusted for inflation, decreased an estimated 0.9 percent. The decline was attributed both to the economic recession and to plastic bottle inroads in the important soft drink market. Some growth of glass container shipments was anticipated in 1982.

All Flat Glass Mfgr's Shipments in the U.S., by Quarters In Millions of Dollars

Year	1st	2nd	3rd	4th	Total	Year	1st	2nd	3rd	4th	Total
1973	142.3	147.2	150.6	157.6	597.6	1978	202.6	210.6	204.2	212.1	829.4
1974	146.0	149.5	135.4	112.6	543.4	1979	210.2	205.3	216.1	226.6	858.1
1975	85.7	105.2	131.1	145.9	468.0	1980[1]	220.3	191.8	211.0	248.0	868.5
1976	153.8	160.1	159.5	171.4	644.8	1981[1]	233.4	248.7	243.3		
1977	165.6	182.8	192.8	198.8	739.9	1982					

[1] Preliminary. *Source: Bureau of Census*

Index of Wholesale Price of Flat Glass (Sheet)[1] Dec. 1980 = 100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1976	8.208	8.208	9.178	9.178	9.178	9.178	9.178	9.178	9.178	9.178	9.178	9.178	9.016
1977	9.300	9.553	9.553	9.553	9.675	9.675	9.675	9.675	9.675	10.023	10.390	10.390	9.761
1978	10.390	10.390	10.390	10.863	10.863	10.863	10.998	10.998	10.998	10.998	10.998	11.138	10.824
1979	11.138	N.A.	N.A.	N.A.	11.444	N.A.	N.A.	11.870	12.030	12.145	12.436	N.A.	11.844
1980[1]	N.A.	12.436	12.152	12.152	N.A.	12.152	12.152	12.152	12.152	N.A.	12.642	100.0	—
1981	100.7	101.0	101.7	109.6	109.6	109.7	109.7	109.7	109.7	109.9	109.9	109.9[1]	107.6

[1] Prior to December, 1980 wholesale price of WINDOW GLASS (Single B) in dollars per 50 square feet, 40 Bracket, mfg. to jobber, carlots; f.o.b. factory freight prepaid. *Source: Bureau of Labor Statistics* (1311–05)

United States Production of Glass Containers In Millions of Gross

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1972	20.4	21.8	23.2	21.9	23.2	24.5	22.7	24.6	21.2	24.4	21.0	18.6	268.5
1973	22.4	22.4	25.2	23.2	24.9	24.6	23.1	24.5	22.3	24.8	21.3	20.4	279.0
1974	24.4	20.8	25.1	23.4	23.1	25.3	25.0	26.0	22.8	25.7	21.6	17.1	280.4
1975	22.7	21.4	22.9	23.0	23.1	24.3	25.3	25.3	25.2	27.0	22.9	19.9	283.1
1976	23.8	24.1	26.2	24.7	26.2	26.6	25.1	28.6	24.3	27.6	24.2	21.0	302.5
1977	22.6	24.3	28.1	24.4	25.7	27.1	26.5	29.5	21.3	25.8	26.5	21.6	303.5
1978	26.0	25.4	28.9	28.8	29.2	28.8	26.9	29.4	26.2	30.0	25.7	21.4	327.6
1979	26.1	26.1	29.3	27.6	28.8	28.6	27.3	28.7	23.5	28.6	26.0	21.3	322.0
1980	27.3	28.1	28.6	27.2	26.6	27.1	27.3	28.6	27.0	29.8	25.4	21.1	327.0
1981	26.0	25.5	28.2	27.9	28.2	29.5	27.8	29.4	25.9	29.3	23.8	20.1	321.6

Source: Bureau of the Census

United States Shipments (Domestic) of Glass Containers In Millions of Gross

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1972	19.3	20.3	26.1	19.3	23.7	24.4	21.5	25.2	22.1	22.1	20.8	20.1	266.0
1973	21.4	19.6	23.6	22.0	26.6	24.0	21.8	26.4	22.7	23.5	21.8	20.9	274.3
1974	23.7	22.7	28.6	22.6	19.8	22.2	24.6	27.7	22.1	21.1	19.4	19.1	273.7
1975	24.2	17.9	21.3	22.6	23.8	25.4	29.5	23.8	23.5	23.9	21.0	22.2	279.0
1976	22.6	21.5	31.4	20.4	24.1	25.3	24.6	27.3	27.7	22.7	21.8	22.9	292.3
1977	22.2	22.5	34.2	21.2	23.9	26.5	24.5	35.4	23.8	21.6	23.4	25.7	304.8
1978	21.1	22.0	27.4	26.5	34.0	27.2	24.5	29.5	27.7	27.4	25.5	22.8	317.4
1979	24.6	23.0	31.0	25.2	28.1	27.1	25.6	29.4	25.1	27.6	27.0	23.3	316.0
1980	24.8	25.2	28.6	24.9	25.6	27.7	28.5	28.8	30.8	27.2	23.5	23.6	323.8
1981	23.4	23.2	29.3	27.4	26.8	30.2	29.2	27.3	26.5	25.9	23.8	23.1	316.2

Source: Bureau of the Census

Gold

The gold market in 1981 was greatly influenced by reduced inflationary expectations, underscored by evolving worldwide recessionary tendencies. In addition, the high rate of return on U.S. interest rate instruments attracted funds away from such non-income producing assets as gold. Sales of gold by the Soviet Union to obtain foreign exchange for grain purchases also played a role in gold price weakness.

The price of gold (unfabricated, New York, Engelhard Industries) began 1981 at $597.50 per troy ounce on January 5, and rose to its 1981 high of $599.25 on the following day. The price later dropped to a 1981 low of $391.25 on August 4 and, after further nervous fluctuations, ended the year at $394.74 per ounce. By mid-March 1982, the price had dropped to $312.00 per ounce.

World mine production of gold in 1981 was estimated by the U.S. Bureau of Mines at 39.2 million ounces versus estimated output of 39.0 million in 1980. Most of the estimated increase was accounted for by larger U.S. production.

U.S. mine production of recoverable gold in 1981 increased 37 percent from the 1980 level, to 1.3 million ounces, as still relatively high gold prices stimulated development of lower-grade deposits and as new mines were opened. U.S. refinery production of gold in 1981 was 11 percent below 1980 output, according to the U.S. Bureau of Mines, primarily because of a reduction in production from old scrap.

Imports of gold by the U.S. for consumption (monetary gold excluded) totaled over 4.65 million ounces in 1981 versus 4.54 million in 1980. And, exports of gold (monetary gold excluded) totaled more than 6.43 million ounces versus 6.12 million in 1980.

Domestic consumption of gold in 1981 approximated 3.16 million ounces versus 3.21 million in 1980, according to preliminary data of the U.S. Bureau of Mines. The use of gold in jewelry and arts increased about 9 percent from the 1980 level; use by the dental trade was off 20 percent; and the industrial use of gold slipped 5 percent from 1980 use.

U.S. industry stocks of gold at the end of 1981 totaled about 0.571 million ounces versus 0.872 million at the end of 1980, while futures exchange stocks totaled about 2.45 million ounces versus 4.99 million. U.S. Treasury Department stocks (including gold in the Exchange Stabilization Fund) totaled 264.11 million ounces versus 264.33 million at the end of 1980. And, "earmarked" gold, held in foreign and international official accounts at the New York Federal Reserve Bank amounted to 350.64 million ounces, compared with 354.45 million a year earlier.

The United States is by far the largest reporting holder of gold, according to International Monetary Fund (IMF) data. As of January 1982, the U.S. held 264.11 million troy ounces of gold. The Federal Republic of Germany was the second largest holder, with 95.18 million ounces. The third largest holder was Switzerland, with 83.28 million ounces. Other important government holdings (in millions of ounces) included: France—81.85 (end of Dec.); Italy—66.67; Netherlands—43.94; Belgium—34.18; Japan—24.23; Austria—21.11; Canada—20.45; and United Kingdom—18.97 (est. Oct. '81). These totals were mostly unchanged from year earlier levels, and do not include 103.4 million ounces of gold held by

World Production of Gold (Mine Output) In Thousands of Fine Ounces (Troy Ounces)

Year	Australia	Zaire (Congo)	Canada	Colombia	Ghana	India	Japan	Mexico	Nicaragua	Philippines	Zimbabwe	South Africa	United States	U.S.S.R.[1]	Total World[1]
1970	620	181	2,409	202	708	104	255	198	115	603	500	32,164	1,743	6,500	47,522
1971	672	172	2,243	189	698	119	255	151	121	637	502	31,389	1,495	6,700	46,495
1972	755	141	2,079	188	724	106	243	146	112	607	502	29,245	1,450	6,900	44,843
1973	554	134	1,954	216	723	105	188	133	85	572	800	27,495	1,176	7,100	43,297
1974	513	131	1,698	265	614	101	140	134	83	538	800	24,388	1,127	7,300	40,124
1975	527	103	1,654	309	524	91	144	145	70	503	600	22,938	1,052	7,500	38,476
1976	503	91	1,692	300	532	101	138	163	76	501	387	22,936	1,048	7,700	39,024
1977	630	80	1,734	263	481	97	149	213	66	559	402	22,502	1,100	7,850	38,921
1978	648	76	1,735	258	402	89	145	202	66	587	399	22,649	999	8,000	38,985
1979[2]	597	70	1,644	269	362	85	128	190	61	561	386	22,617	970	8,160	38,802
1980[1]	557	40	1,552	280	410	79	130	196	66	701	367	21,669	951	8,300	39,000
1981[1]			1,700									21,500	1,240		39,200

[1] Estimated. [2] Preliminary. *Source: U.S. Bureau of Mines*

Monthly Average Gold Price (Unfabricated)—Engelhard Industries $ Per Troy Oz.

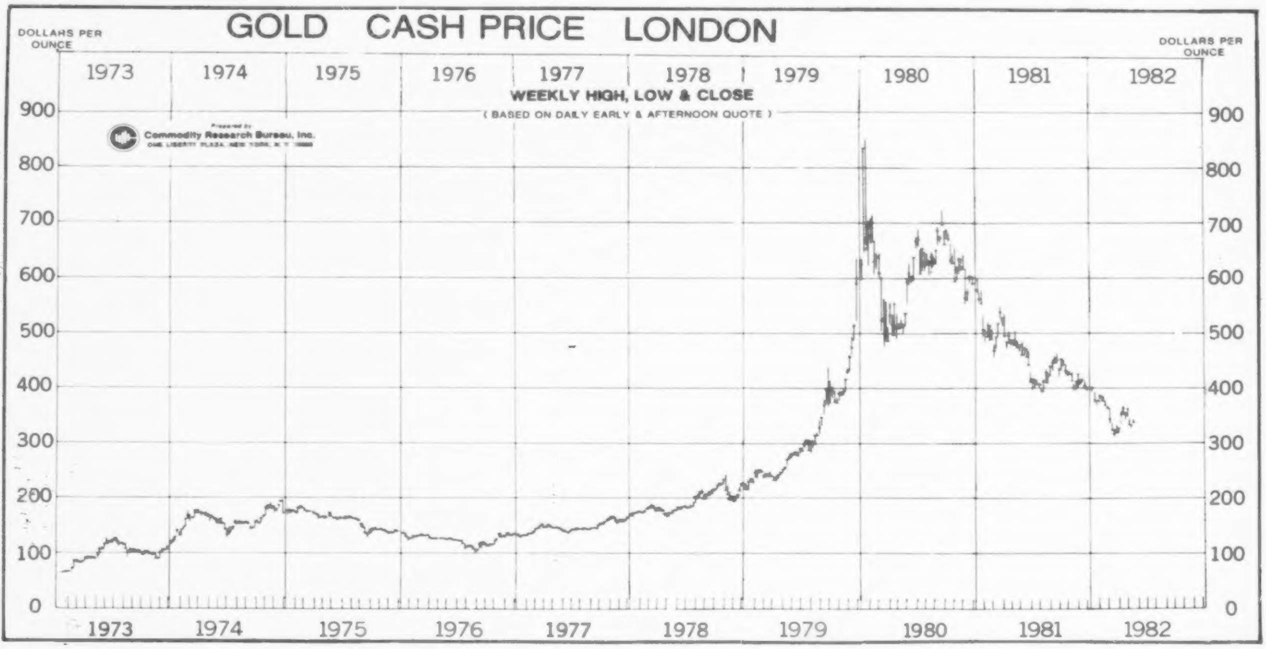
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1975	176.8	180.0	178.6	170.3	167.9	164.7	165.7	163.5	144.1	143.3	143.3	139.8	161.49
1976	125.3	131.7	133.1	128.4	127.4	126.2	118.0	110.1	114.7	116.6	131.4	134.4	124.77
1977	132.9	136.7	148.7	149.7	147.2	141.5	144.0	145.5	150.1	159.4	162.8	161.1	148.31
1978	173.7	178.6	184.1	175.8	176.5	184.1	189.3	206.3	212.4	227.7	206.2	208.1	193.55
1979	227.6	245.8	242.4	239.1	257.6	275.4	295.3	301.7	357.2	392.0	392.6	459.0	307.50
1980	675.4	665.3	553.6	516.8	514.0	600.7	643.3	627.5	675.8	661.2	622.4	594.9	613.28
1981[2]	557.4	500.3	498.8	494.9	479.8	460.8	408.9	410.9	444.1	437.8	412.9	409.3	459.6
1982[1]	384.1	374.1	330.0	350.0									

[1] Estimate. [2] Preliminary. *Source: U.S. Bureau of Mines*

the IMF or an estimated 85.7 million held jointly by EEC members as backing for the European Currency Unit.

Futures Markets

Gold futures are traded in the U.S. on the Commodity Exchange, Inc. (N.Y.), the International Monetary Market (IMM) and the MidAmerica Commodity Exchange in Chicago. Futures trading in Gold began in London and Japan in 1982. Gold futures are also traded in Hong Kong and in Winnipeg.



Salient U.S. Gold Statistics In Thousands of Troy Ounces

Year	Mine Production	Value Mil. $	Refinery Prod. New (Domestic)	Refinery Prod. Secondary	Exports[2]	General Imports[2]	Stocks, Dec. 31 Treas. Dept.	Stocks, Dec. 31 Futures Exch.	Stocks, Dec. 31 Industrial	Consumption Dental	Consumption Industrial[3]	Consumption Jewelry & Arts	Consumption Total	Price $ Per Troy Oz.[4]
1969	1,733	71.9	1,717	2,920	338	5,861			4,158	710	2,560	3,839	7,109	41.51
1970	1,743	63.4	1,750	2,780	1,074	6,652			3,984	658	1,975	3,340	5,973	36.41
1971	1,495	61.7	1,437	2,202	1,339	7,201			4,375	750	1,884	4,299	6,933	41.25
1972	1,450	85.0	1,478	2,107	1,472	6,126			4,407	750	2,191	4,344	7,285	58.60
1973	1,176	115.0	1,210	1,779	2,985	3,845			4,498	679	2,577	3,473	6,729	97.81
1974	1,127	180.0	1,021	1,926	3,963	2,651			5,670	509	1,740	2,402	4,651	161.08
1975	1,052	169.9	1,093	2,696	3,496	2,662	275	530	788	595	1,059	2,080	3,993	161.49
1976	1,048	131.3	954	2,504	3,531	2,656	275	320	928	694	1,233	2,562	4,648	125.32
1977	1,100	163.2	956	2,454	8,671	4,454	278	1,835	1,976	728	1,209	2,658	4,863	148.31
1978	999	193.3	962	3,085	5,509	4,690	276	2,752	1,672	706	1,313	2,651	4,738	193.55
1979	970	298.3	795	2,883	16,499	4,630	265	2,473	868	646	1,406	2,688	4,785	307.50
1980[1]	951	582.8	773	3,824	6,119	4,542	264	4,998	872	341	1,287	1,505	3,215	612.56
1981[5]	1,304		801	3,288	6,438	4,652	264	2,449	571	272	1,226	1,641	3,161	459.64

[1] Preliminary. [2] Excludes coinage. [3] Including space & defense. [4] Engelhard selling quotations. [5] Estimate. *Source: Bureau of Mines*

Gold Total Open Interest at New York (COMEX) & Chicago IMM In Thousands of Contracts

Year	At New York (COMEX) Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1	At Chicago (IMM) Jan. 1	Apr. 1	July 1	Oct. 1
1978	54.1	55.6	64.3	58.2	51.8	50.4	52.8	60.3	67.8	88.2	116.7	130.7	37.6	40.0	52.8	86.6
1979	183.2	165.4	173.2	160.5	165.2	160.7	143.6	177.9	176.1	171.3	176.2	197.9	99.9	68.7	74.5	61.7
1980	240.1	170.1	163.6	131.8	125.0	108.8	169.3	152.4	166.0	208.4	252.9	254.4	79.6	27.0	60.0	79.9
1981	295.5	211.4	202.5	180.8	187.9	198.6	214.7	215.9	203.1	198.6	202.6	187.3	88.6	54.8	78.5	56.5
1982	175.6	153.0	145.8	134.8	134.6								33.1	18.7		

Source: Commodity Exch. Inc. of N.Y. (COMEX) & International Monetary Market of Chicago (IMM)

U.S. Mine Production of Recoverable Gold In Thousands of Troy Ounces

Year	Alaska	Arizona	California	Colorado	Idaho	Montana	Nevada	New Mexico	South Dakota	Utah	Other States	Total U.S.
1969	21.2	110.9	7.9	25.8	3.4	24.2	456.3	9.0	593.1	433.4	47.0	1,733.2
1970	34.8	109.9	5.0	37.1	3.1	22.5	480.1	8.7	578.7	408.0	55.3	1,743.3
1971	13.0	94.0	3.0	42.0	3.6	15.6	374.9	10.7	513.4	369.0	55.9	1,495.1
1972	8.6	103.0	3.4	61.1	2.9	23.7	419.7	14.9	407.4	362.4	41.8	1,449.9
1973	7.1	102.8	3.6	63.4	2.7	27.8	260.4	13.9	357.6	307.1	29.2	1,175.8
1974	9.1	90.6	5.0	52.1	2.9	28.3	298.8	15.4	343.7	254.9	26.0	1,126.9
1975	15.0	85.8	9.6	55.5	2.5	17.3	332.8	15.0	304.9	189.6	24.2	1,052.3
1976	22.9	102.1	10.4	50.8	2.8	24.1	288.0	15.2	318.5	187.3	26.1	1,048.0
1977	19.0	90.2	5.7	72.7	12.9	22.3	324.0	13.6	304.8	210.5	24.0	1,100.3
1978	18.7	93.0	7.5	32.1	20.5	20.0	260.9	9.9	285.5	235.9	14.6	998.8
1979	6.7	101.8	3.2	13.9	24.1	24.1	250.1	23.0	245.9	260.9	16.3	969.9
1980	9.8	72.8	3.7	39.4	[2]	48.4	274.4	15.8	267.4	179.5	40.0	888.0
1981[1]	18.4	98.4	5.7	47.5	[2]	49.9	489.4	50.0	278.0	225.3	41.4	1,304.0
1982												

[1] Preliminary. [2] Included in "OTHER STATES." *Source: Bureau of Mines*

Commodity Exchange Inc. (COMEX) Warehouse Stocks of Gold In Thousands of Ounces

Year	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1975			301.6	428.7	328.1	442.3	465.8	527.0	562.6	590.6	559.2	517.1
1976	403.2	369.1	342.0	350.8	364.8	355.5	327.3	282.3	270.0	273.1	258.2	258.7
1977	291.8	364.2	359.0	379.9	409.3	454.1	466.7	522.4	601.8	601.2	946.4	1,788
1978	1,822	2,084	2,480	2,736	2,883	2,864	2,796	2,894	2,870	2,734	2,780	2,629
1979	2,604	2,566	2,540	2,501	2,286	2,443	2,700	2,480	2,509	2,512	2,281	2,277
1980	2,253	2,445	2,575	2,897	3,097	3,291	3,386	3,597	3,619	3,832	4,873	5,099
1981	4,814	4,570	4,192	3,897	3,513	3,585	3,417	3,258	2,887	2,776	2,605	2,494
1982	2,366	2,339	2,267	2,196	2,198							
1983												

Source: Commodity Exchange, Inc.—N.Y.

U.S. Monetary Stock of Gold at End of Month In Billions of Dollars

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1971	10.73	10.73	10.73	10.73	10.33	10.33	10.33	10.33	10.13	10.13	10.13	10.13
1972	10.13	9.59	9.59	9.59	10.41	10.41	10.41	10.41	10.41	10.41	10.41	10.41
1973	10.410	10.410	10.410	10.410	10.410	10.410	10.410	10.410	10.410	11.567	11.567	11.567
1974	11.567	11.567	11.567	11.567	11.567	11.567	11.567	11.567	11.567	11.567	11.567	11.652
1975	11.635	11.621	11.620	11.620	11.620	11.620	11.618	11.599	11.599	11.599	11.599	11.599
1976	11.599	11.599	11.599	11.598	11.598	11.598	11.598	11.598	11.598	11.598	11.598	11.598
1977	11.658	11.650	11.636	11.636	11.629	11.620	11.595	11.595	11.595	11.595	11.595	11.719
1978	11.718	11.718	11.718	11.718	11.718	11.706	11.693	11.679	11.668	11.655	11.642	11.671
1979	11.592	11.544	11.479	11.418	11.354	11.323	11.290	11.259	11.228	11.194	11.112	11.112
1980	11.172	11.172	11.172	11.172	11.172	11.172	11.172	11.172	11.168	11.163	11.162	11.160
1981	11.159	11.156	11.154	11.154	11.154	11.154	11.154	11.154	11.152	11.152	11.151	11.151
1982	11.151											

Source: Federal Reserve Board

Total Volume of Trading of Gold Futures at New York (COMEX) In Thousands of Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	230.6	170.9	267.7	176.6	176.6	162.5	202.6	411.4	374.4	460.6	550.6	557.9	3,742
1979	607.7	506.8	386.2	335.9	557.9	527.9	601.0	591.3	594.5	552.8	565.5	714.5	6,542
1980	829.3	378.3	560.0	316.1	391.2	652.7	747.2	460.5	839.5	863.5	938.4	1,024.7	8,001
1981	943.6	708.7	994.5	695.7	782.6	780.1	836.5	862.1	1,063.4	769.0	886.8	1,050.5	10,374
1982	922.4	669.0	1,264.7	966.3									
1983													

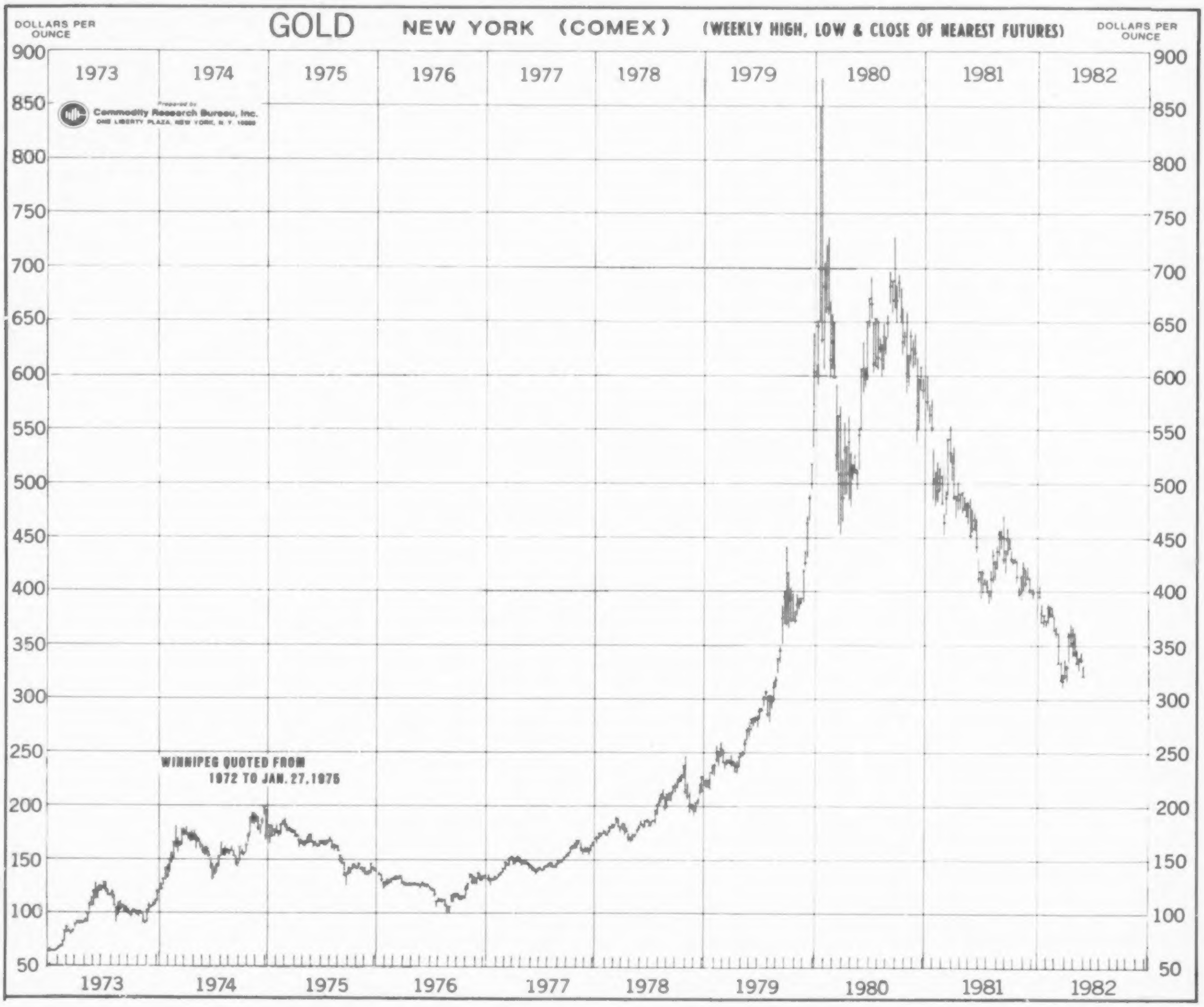
Source: Commodity Exchange, Inc.—N.Y. (Comex)

GOLD

High, Low & Closing Prices of December Gold Futures on COMEX In Dollars per Ounce

Year of Delivery		Yr. Prior to Deliv. Oct.	Nov.	Dec.	Delivery Year Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Life of Delivery Range
1978	High	179.1	183.6	179.3	191.7	196.5	204.3	193.9	194.3	195.5	210.0	221.5	224.6	249.4	230.7	221.0	249.4
	Low	166.1	167.7	167.8	176.7	183.3	186.1	172.8	175.6	187.2	188.6	201.5	207.6	220.2	191.2	193.0	152.0
	Close	175.0	173.4	178.7	189.4	195.0	194.1	177.0	192.8	189.2	209.8	210.6	220.9	240.7	193.2	219.3	—
1979	High	274.6	257.0	250.8	263.0	278.0	271.6	264.1	291.6	297.6	319.5	330.0	409.0	444.5	421.0	510.0	510.0
	Low	242.0	213.1	214.0	237.2	248.5	251.5	244.0	258.9	284.4	292.4	288.0	330.5	373.0	365.0	424.0	187.6
	Close	267.0	214.9	249.8	253.2	271.6	256.6	262.4	290.7	293.5	297.3	326.7	404.5	385.7	419.1	506.3	—
1980	High	491.5	478.5	625.0	959.9	840.0	757.9	625.0	582.6	693.0	726.0	679.5	748.5	708.5	665.0	638.5	959.9
	Low	420.5	426.0	483.0	644.1	709.0	519.0	533.0	518.4	582.0	620.0	620.0	656.0	627.0	593.0	539.0	270.3
	Close	439.8	476.8	619.1	789.5	732.8	570.3	543.4	575.7	679.8	642.0	656.0	688.5	642.0	624.6	606.5	—
1981	High	814.0	779.0	753.0	690.0	585.5	605.7	585.5	549.0	523.5	453.0	463.0	482.4	469.0	436.0	428.5	981.0
	Low	733.5	695.0	640.0	551.0	538.0	497.2	512.0	502.0	445.5	417.0	405.0	428.0	426.5	392.5	394.5	392.5
	Close	750.2	738.7	680.1	563.4	536.5	562.1	529.5	518.6	449.5	423.2	443.5	443.0	431.2	408.3	393.3	—
1982	High	539.0	500.0	478.0	455.0	433.0	399.5	402.5									
	Low	493.0	437.0	441.0	410.0	396.0	340.0	352.0									
	Close	496.6	454.1	446.5	428.3	397.8	357.6	369.8									

Source: Commodity Exchange, Inc. of N.Y. (COMEX)



Grain Sorghums

The 1981 U.S. sorghum crop totaled 880 million bushels, up 52 percent from 1980's drought-reduced 579 million bushel crop and only 5 percent below the 1973 record. Acreage planted to sorghum totaled 16 million acres, up 2 percent from 1980. Acreage harvested for grain reached 13.7 million acres, up 1.2 million from 1980. Favorable growing conditions in the major producing states increased the U.S. average yield to a record 64.1 bushels per acre, vs. 46.3 bushels the previous year and 1.4 bushels above the previous yield record set in 1979.

The USDA estimated 1981/82 sorghum supply at 989 million bushels, 36 percent above 1980/81. Because of weak world grain demand, U.S. 1981/82 exports of sorghum were projected at 275 million bushels, 25 million below the previous season. Domestic use was estimated at 411 million bushels, 93 million above 1980/81, primarily due to larger supplies, lower prices, and abnormally low feed usage in 1980/81. Disappearance during October–December 1981 totaled 310 million bushels, 18 percent above the same period in 1980.

Carryover at the end of the 1981/82 season was projected by the USDA at 303 million bushels, nearly 280 percent above a year earlier. January 1, 1982 stocks totaled 679 million bushels, 46 percent above the previous year. Sorghum prices began weakening in late summer 1981 in response to improving sorghum and corn crop prospects and slackening demand. In October–December 1981 the average farm price was $2.18 per bushel. Prices in mid-January averaged $2.26 per bushel. The USDA estimated that farm prices in 1981/82 would average $2.25 to $2.35 per bushel vs. $2.94 in 1980/81.

Producers reported that they intended to plant 15.7 million acres of sorghum for all purposes in 1982, 2 percent below 1981 plantings. Texas, Kansas, and Nebraska reported 1982 acreage intentions of 5 million, 4.2 million and 2.1 million acres; up 4 percent, down 2 percent, and down 9 percent, respectively, from 1981 planted acreage.

U.S. Government Price Support

Prices in the first 5 months of the 1981/82 marketing year averaged well below the 1981 target price of $2.55 per bushel and eligible producers were scheduled to receive deficiency payments totaling around $200 million in early April 1982. The 1982 target price was increased 5 cents to $2.60 per bushel. The 1982 regular and Grain Reserve loan rates were increased to $2.42 and $2.75 per bushel from $2.28 and $2.42, respectively, in 1981. However, in order for producers to be eligible for target price protection, regular and Grain Reserve loans, they must have complied with requirements of the 1982 10-percent feedgrain acreage set-aside program.

Salient Statistics of Grain Sorghums in the United States

		For Grain					For Silage				Sorghum		U.S. Exports Under Gov't. Programs	
Crop Year	Acreage Planted[2] for All Purposes	Acreage Harv.	Production 1,000 Bushels	Yield Per Harv. Acre Bushels	Price Cents Per Bushel	Produc. Value 1,000 Dollars	Acreage Harv. 1,000 Acres	Production 1,000 Tons	Yield Per Harv. Acre Tons	For Forage Acreage Harv. 1,000 Acres	Used on Farms where Produced	Sold	Mutual Security (AID)	Total
	1,000 Acres										(In Mil. Bushels)		(In Ths Metric Tons)	
1972–3	17,295	13,212	801,350	60.7	137	1,096,062	840	9,946	11.8	2,427	165.1	636.2	—	1,462
1973–4	19,231	15,700	923,224	58.8	214	1,978,268	836	9,520	11.4	2.093	180.8	742.4	115	960
1974–5	17,676	13,809	622,711	45.1	277	1,721,927	745	7,279	9.7	2,140	162.8	459.9	—	158
1975–6	18,104	15,403	754,354	49.0	236	1,777,100	763	7,492	9.9	1,438	174.7	579.9	148	210
1976–7	18,402	14,466	710,797	49.1	203	1,431,190	793	7,317	9.3	1,802	203.6	507.2	(610)	(657)
1977–8	16,993	13,797	780,944	56.6	182	1,411,570	839	9,184	10.9	1,556	249.3	531.6	1,306	1,834
1978–9	16,197	13,410	731,270	54.5	201	1,464,187	724	7,920	10.9	1,449	236.5	494.8	1,440	2,024
1979–0	15,277	12,901	808,862	62.7	234	1,879,823	764	9,015	11.8	1,211	260.3	548.5	1,445	2,130
1980–1	15,644	12,522	579,197	46.3	294	1,696,008	732	7,002	9.6	1,410	195.5	392.5	224	1,085
1981–2[1]	16,024	13,726	880,266	64.1	232	2,032,034	757	9,139	12.1	1,081				
1982–3[1]	15,671													

[1] Preliminary. [2] Grain and sweet sorghums for all uses including sirup. *Source: Crop Reporting Board, U.S.D.A.*

Production of All Sorghums for Grain in the United States, by States In Thousands of Bushels

Year	Iowa	Arizona	California	Colorado	Kansas	Missouri	Nebraska	New Mexico	No. Carolina	Oklahoma	South Dakota	Texas	Arkansas
1972	2,460	8,346	17,424	10,030	217,000	26,980	118,080	19,305	4,400	20,855	13,536	319,780	
1973	1,606	7,992	20,090	9,100	218,400	30,800	136,000	19,602	4,292	26,400	11,266	417,000	
1974	736	8.580	15,120	7,685	132,800	23,750	62,700	11,000	4,320	19,080	5,616	312,000	6,720
1975	1,612	8,160	14,904	7,540	144,060	28,090	104,500	15,500	4,335	19,760	6,422	374,400	9,800
1976	1,690	6,643	14,910	7,252	169,850	39,600	119,700	11,940	4,590	16,950	3,496	292,900	15,500
1977	2,368	7,200	9,636	8,153	243,000	67,890	146,970	11,760	2,664	21,470	16,807	230,400	13,104
1978	1,800	1,950	9,585	10,540	196,860	66,300	140,250	12,282	4,042	17,460	17,750	227,850	12,000
1979	1,406	1,775	10,500	12,920	246,330	59,040	151,680	13,416	3,750	23,175	15,525	243,000	10,912
1980	1,330	1,950	11,096	12,250	149,640	41,280	121,800	10,280	2,232	16,320	10,725	181,700	5,887
1981[1]	1,760	2,158	10,212	12,775	238,520	75,200	164,800	12,240	4,134	22,050	19,565	273,420	16,986

[1] Preliminary, December estimate. *Source: Crop Reporting Board, U.S.D.A.*

GRAIN SORGHUMS

U.S. Grain Sorghum Quarterly Supply and Disappearance In Millions of Bushels

Year & Periods Beginning Oct. 1	Supply				Disappearance							Ending Stocks		
					Domestic Use									
	Begin. Stocks	Production	Imports	Total Supply	Food	Alc. Beverages	Seed	Feed & Resid.	Total	Exports	Total	Gov't. Owned[1]	Privately Owned[2]	Total Stocks
1978–9	190.5	731.3	[4]	921.8	6.0	3.2	1.8	544.7	555.7	206.6	762.3	43.6	115.9	159.5
Oct.–Dec.	190.5	731.3	[4]	921.8	1.4	1.1	—	235.7	238.2	46.6	284.8	36.6	600.4	637.0
Jan.–Mar.	637.0	—	—	637.0	1.6	.4	.2	149.2	151.4	68.3	219.7	42.4	374.9	417.3
Apr.–May	417.3	—	—	417.3	1.3	.4	1.1	64.3	67.1	28.0	95.1	42.8	279.4	322.2
June–Sept.	322.2	—	[4]	322.2	1.7	1.3	.5	95.5	99.0	63.7	162.7	43.6	115.9	159.5
1979–0	159.5	808.9	[4]	968.4	6.0	5.0	2.0	484.0	497.0	324.9	821.9	43.9	102.6	146.5
Oct.–Dec.	159.5	808.9	—	968.4	1.6	1.5	—	243.4	246.5	74.2	320.7	45.3	602.4	647.7
Jan.–Mar.	647.7	—	—	647.7	1.6	1.1	.2	140.3	143.2	108.5	251.7	45.6	350.4	396.0
Apr.–May	396.0	—	—	396.0	1.4	.5	1.2	54.7	57.8	60.3	118.1	45.6	252.3	277.9
June–Sept.	277.9	—	[4]	277.9	1.4	1.9	.6	45.6	49.5	81.9	131.4	43.9	102.6	146.5
1980–1[3]	146.5	579.2	[4]	725.7	5.0	4.0	2.0	307.4	318.4	298.7	617.1	38.2	70.4	108.6
Oct.–Dec.	146.5	579.2	[4]	725.7	1.6	1.2	—	198.2	201.0	60.3	261.3	43.7	420.7	464.4
Jan.–Mar.	464.4	—	[4]	464.4	1.6	.9	.2	63.8	66.5	84.1	150.6	43.5	270.3	313.8
Apr.–May	313.8	—	[4]	313.8	.8	.7	1.2	84.9	87.6	41.7	129.3	43.8	140.7	184.5
June–Sept.	184.5	—	[4]	184.5	1.0	1.2	.6	–39.5	–36.7	112.6	75.9	38.2	70.4	108.6
1981–2[3]	108.6	880.3	[4]	988.9	5.0	4.0	2.0	400.0	411.0	275.0	686.0			302.9
Oct.–Dec.	108.6	880.3	[4]	988.9	1.6	1.0	—	229.1	231.7	77.8	309.5	38.4	641.0	679.4

[1] Uncommitted inventory. [2] Includes quantity under loan & farmer-owned reserve. [3] Preliminary. [4] Less than 50,000 bushels. *Source: Commodity Economics Division, U.S.D.A.*

U.S. Exports of Grain Sorghums, by Country of Destination In Thousands of Metric[2] Tons

Yr. Beg. October	Poland	Belg. & Luxem.	Portugal	Spain	Germany, West	India	Venezuela	Israel	Japan	Senegal	Netherlands	Norway	Mexico	United Kingdom	Total All Exports
1974–5	9,900	9,900		1,500	3,600	3,500		24,000	76,800		16,100	4,700	27,500	—	212,000
1975–6	22,700	18,900	6,300	3,000	3,100	19,600	16,300	25,600	88,000		13,500	4,400	1,600	700	229,000
1976–7	3,647	12,908	17,600	13,900	6	0	1,300	29,214	93,462		6,239	7,542	26,856	2,100	246,107
1977–8[2]	383.7	87.1			.2	—		633.9	2,439.8	60.6	6.7		468.0		5,422.9
1978–9	136.4	—			.8	—		689.4	1,981.1	1.2	37.8	141.5	1,124.0		5,247.1
1979–0[1]	107.5	.3			.3	—		348.0	3,974.2	13.7	69.1	232.8	2,287.6		8,254.5

[1] Preliminary. [2] Data prior to 1977–8 are in THOUSANDS OF BUSHELS. *Source: Grain & Feed Division, U.S.D.A.*

Average Price of Sorghum Grain, No. 2, Yellow at Kansas City In Dollars Per 100 Pounds (Cwt.)

Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Average
1974–5	6.32	6.10	5.36	4.95	4.55	4.48	4.64	4.60	4.53	4.82	5.13	4.66	5.01
1975–6	4.53	4.36	4.33	4.36	4.47	4.62	4.47	4.49	4.66	4.73	4.29	4.27	4.46
1976–7	3.88	3.60	3.77	3.91	3.85	3.75	3.62	3.53	3.28	3.15	2.73	2.78	3.49
1977–8	3.05	3.40	3.36	3.37	3.49	3.78	3.92	3.92	3.82	3.54	3.41	3.43	3.54
1978–9	3.61	3.67	3.64	3.71	3.73	3.77	3.81	3.92	4.41	4.89	4.44	4.34	4.00
1979–0	4.42	4.41	4.57	4.21	4.35	4.20	4.15	4.31	4.49	5.36	5.71	5.61	4.65
1980–1[1]	5.65	5.91	5.82	5.79	5.52	5.46	5.49	5.38	5.23	5.29	4.58	4.16	5.36
1981–2[1]	4.14	4.14	4.28	4.44	4.26	4.28							

[1] Preliminary. *Source: Economic Research Service, U.S.D.A.*

Grain Sorghum Price Support Program & Market Prices

Year Beginning October	Price Support Operations (Million Bushels)										No. 2 Yellow ($ Cwt.)			
	Placed Under Price Support								$ Per Cwt.					
	Loans	Purchase Agreements	Total	Redeemed by Farmers	Delivered to CCC	In Reserve Prog.	Loans Outstanding	Owned by CCC October 1	Support Loan	Target Price	Kansas City	Fort Worth	Los Angeles	Gulf Ports
1974–5	3.9			4	0			0	1.88	—	5.04	5.62	6.12	5.47
1975–6	8.8			8	0			0	1.88	2.34	4.46	4.93	5.63	4.94
1976–7	21			19	—			0	2.55	2.66	3.49	3.64	4.68	4.11
1977–8	217			133	41	1	0	0	3.39	4.07	3.54	3.88	4.82	4.16
1978–9	92			87	5	0	0	0	3.39	4.07	4.00	4.40	5.44	4.65
1979–0[1]	64			64	0	0	0	0	3.57	4.18	4.64	4.97	6.32	5.54
1980–1[2]	32			21	1	9	2	11	3.82	4.46	5.36	5.86		6.16
1981–2[2]	257			10	0	189	58	247	4.07	4.55	4.25	4.70		5.10

[1] Preliminary. [2] Estimate. *Source: Economic Research Service, U.S.D.A.*

Hard Fibers

World production of sisal and henequen in 1981 was expected to decrease by about 6 percent to 482,000 tonnes (metric tons) from 512,000 in 1980.

Tanzania's sisal industry, once a leading foreign exchange earner, continued to decline as many sisal estates were abandoned and overgrown. Prospects of immediate recovery appeared limited without a massive industry rehabilitation program. Exports of raw sisal in 1982 were expected total 62,000 tons, down from 63,000 tons in 1981 and 64,000 tons in 1980. Exports of sisal twine and cordage also were projected to be down in 1982 to only 20,000 tons, compared with 22,000 tons and 25,000 tons in 1981 and 1980, respectively. U.S. imports of raw sisal and henequen from all origins in 1981 totaled 3,524 tons, down 28 percent from 1980. Imports from Tanzania dropped from 626 tons in 1980 to only 223 tons in 1981. While the United States continued to import some raw fiber, it was relatively more important as the largest market for sisal and henequen products.

With the impact of rapidly rising production costs, dwindling international demand, competition from synthetics, and little change in world prices, incentives for growers to sustain sisal and henequen yields appeared to be on the downswing. In areas where alternative cropping was possible, some farmers abandoned less productive sisal fields and turned their energy to more profitable crops. Also, lack of sufficient labor, especially leaf cutters, on sisal plantations continued to cause problems for many growers.

World 1981 abaca production—at 77,100 tons—was expected to be down marginally from 1980's 79,800-ton crop because of lower output in the Philippines. Ecuador, the only other producer of commercially significant quantities, accounted for about 12 percent of production. Exports of raw fiber from these two countries were expected to reach a 50,300 tons, up 3 percent from 1980 levels.

World Production of Hard Cordage Fibers In Thousands of Metric Tons[2]

	Abaca				Sisal								Henequen		
Year	Philippines	Ecuador	Others	World Total	Tanzania	Haiti	Brazil	Angola	Madagascar	Mozambique	Kenya	World Total	Mexico	Others	World Total
1969	161.8	*65–9*	*65–9*	167.8	461.4	50.7	438.0	124.2	*65–9*	66.2	109.8	1,391	298.0	*65–9*	328.0
1970	179.2	*Avg.*	*Avg.*	184.2	445.8	42.0	452.0	115.2	*Avg.*	63.9	96.8	1,347	307.5	*Avg.*	353.0
1971	149.0	*(1.0*	*(1.0*	155.6	399.0	28.7	463.0	143.3	*(14.0*	55.1	98.8	1,340	320.0	*(24.2*	335.5
1972	161.4	*M.T.)*	*M.T.)*	169.1	346.0	31.1	573.2	150.0	*M.T.)*	48.5	90.8	1,400	320.0	*M.T.)*	357.0
1973[2]	82.2	4.6	1.0	87.8	155.4	17.0	260.0	70.0	22.0	23.0	70.0	653.0	155.0	16.0	171.0
1974	87.0	9.5	2.0	98.5	135.4	19.0	225.0	70.0	22.6	18.8	86.0	615.1	148.7	14.6	163.3
1975	46.1	9.9	1.5	57.5	123.0	12.0	185.0	40.0	21.0	15.0	43.6	477.0	115.0	14.0	129.0
1976	72.5	13.2	1.5	87.2	119.0	5.0	165.0	25.0	18.6	19.0	33.6	422.5	116.0	14.0	130.0
1977	67.8	9.8	1.5	79.1	105.0	6.0	170.0	3.0	18.8	14.0	32.2	381.5	102.0	6.5	108.5
1978	66.0	11.2	1.5	78.7	92.0	9.0	151.0	7.0	15.9	14.0	31.5	350.4	85.0	6,6	91.6
1979	76.8	9.8	1.5	88.1	81.4	11.0	197.0	7.8	14.9	11.0	36.5	389.6	82.0	6.5	88.5
1980[1]	72.3	10.2	1.5	84.0	77.0	16.0	205.0	8.5	16.0	12.0	47.5	412.0	86.0	6.5	92.5
1981[3]	75.0	10.2	1.5	86.7	81.0	10.0	190.0	9.0	16.0	12.0	31.8	379.8	89.0	6.5	95.5
1982															

[1] Preliminary. [2] Data prior to 1973 are in MILLIONS OF POUNDS. [3] Estimate. *Source: Foreign Agricultural Service, U.S.D.A.*

Imports[2] of Hard Fibers into the U.S., by Country of Origin In Thousands of Metric[3] Tons

	Abaca (or Manila)				Henequen			Sisal						Kapok	
Year	Philippines	Other	Ecuador	Total (All)	Mexico	Total (All)	Coir	Haiti	Brazil	Kenya	Tanzania & Uganda	Mozambique	Total (All)	Total (All)	Thailand
1969	19.4	.1		21.4	20.8	20.8	2.4	8.6	15.0	—	7.1	.1	33.2	9.8	8.6
1970	19.0	—1.9—		21.2	26.8	26.8	2.8	7.0	13.8	—	9.7	—	31.8	11.5	10.6
1971	14.7	—1.4—		16.2	39.1	39.1	2.6	3.2	8.8	—	7.6	.3	21.8	12.2	11.2
1972	19.0	—2.0—		21.0	35.5	35.5	3.7	.4	6.8	—	4.5	.7	13.8	11.0	10.1
1973	17.7	—2.9—		20.5	17.5	17.5	5.6	3.3	7.5	—	2.1	—	14.3	13.6	13.3
1974	30.0	—6.2—		36.2	.6	.6	9.2	2.4	3.9	—	2.1	.1	9.6	10.1	9.8
1975	9.4	—9.1—		18.6			6.1	.6	5.4	—	.5	.6	8.8	6.3	6.2
1976	14.2	—8.0—		22.2	.3	.3	6.4	.2	7.1	—	4.0	1.6	14.5	7.5	7.5
1977[3]	14.3	—12.3—		26.7	.1	.1	8.6	—	9.1	1.3	1.0	.2	11.9	5.8	5.8
1978	13.9			22.1	.4	.4	9.7	.1	7.9	12.5	.7	0	21.5	6.3	6.2
1979	16.5	.1	8.1	24.7	.2	.2	10.5	.3	4.9	1.9	.3	.6	8.1	4.8	4.7
1980[1]	19.1	.5	6.6	26.1	.2	.2	11.2	1.4	1.5	1.1	.6	0	4.7	3.1	2.9
1981															

[1] Preliminary. [2] Imports for consumption. [3] Data prior to 1977 are in THOUSANDS OF LONG TONS. *Source: Dept. of Commerce*

Hay

U.S. hay production during the 1981/82 crop year which began on May 1, 1981 was estimated by the USDA at 143 million tons, an increase of 9 percent from the 1980/81 crop. Acreage harvested increased 1.0 percent from 1980 to 60.2 million acres in 1981. Average yield also increased, from 2.21 tons per acre in 1980/81 to 2.38 tons per acre in 1981/82.

Alfalfa and alfalfa mixture hay production in 1981/82 was estimated at 83.7 million tons, an increase of about 5 percent from the previous season's total of 79.9 million tons. Acreage harvested increased slightly to 26.4 million acres, which was accompanied by a yield increase of 4.3 percent to 3.17 tons per acre. The acreage and yield increases reflected better growing conditions in 1981 than in 1980 when drought reduced production.

Production of all other hay was estimated at 59.4 million tons, up 16 percent from the 1980/81 crop. Acreage increased 2 percent to 33.8 million acres and yield increased 14 percent to 1.76 tons per acre from the previous season.

With an estimated May 1, 1981 carryover of 25.4 million tons, total 1981/82 supplies were forecast at 168.6 million tons, 3 percent above a year ago. This provides about 1.81 tons of hay for each roughage-consuming animal unit (RCAU), unchanged from a year ago.

Stocks of hay on farms January 1, 1982 totaled 99.9 million tons, 9 percent greater than a year ago, but 8 percent below the record high stocks of 108 million tons on hand January 1, 1980. Higher January 1, 1982 stocks reflected larger 1981 production in most States.

Disappearance from May 1, 1981 to January 1, 1982 was 68.8 million tons, 5 percent less than the record high disappearance of 72.4 million tons during the same period a year earlier.

In December 1981, the average price for hay was $65.90 per ton, 14 percent below a year ago. The average price for May 1981 through January 1982 was $66.90, compared with $71.14 a year earlier.

Salient Statistics of All Hay in the United States

Year Beginning May	Acres Harvested 1,000 Acres	Yield Per Acre Tons	Production (Million Tons)	Carry-over May 1 (Million Tons)	Disappearance (Million Tons)	Farm Disposition: Kept on Farms (Million Tons)	Farm Disposition: Sold (Million Tons)	Supply Per Animal Unit (In Tons)	Disappearance Per Animal Unit (In Tons)	Animal Units Fed[2] Millions	Farm Price[3] $ Per Ton	Farm Produc. Value Million $	Price Received by Farmers: Alfalfa Seed (Dollars Per Cwt.)	Price Received by Farmers: Timothy Seed (Dollars Per Cwt.)	Price Received by Farmers: Red Clover Seed (Dollars Per Cwt.)
1971-2	61,355	2.10	129.1	22.2	125.8	104.1	25.1	1.66	1.38	91.1	28.10	3,335	35.00	8.05	27.50
1972-3	59,680	2.15	128.6	25.5	129.8	102.8	25.8	1.65	1.39	93.2	31.30	3,730	43.60	15.60	40.70
1973-4	61,828	2.17	134.2	24.3	133.0	107.0	27.2	1.59	1.34	99.5	41.60	5,004	86.40	31.80	61.90
1974-5	60,195	2.10	126.4	25.4	133.3	100.9	25.5	1.46	1.28	103.8	50.90	5,791	83.70	21.30	58.40
1975-6	61,353	2.16	132.4	18.5	125.4	105.6	26.6	1.54	1.28	98.2	52.20	6,458	68.60	14.80	49.50
1976-7	60,377	1.99	120.1	25.5	126.1	94.7	25.5	1.54	1.33	94.8	60.20	6,815	102.00	27.50	63.10
1977-8	60,988	2.17	132.2	19.5	127.5	105.1	27.1	1.70	1.42	89.5	53.70	6,826	108.00	50.60	73.80
1978-9	62,113	2.32	143.8	24.2	137.9	115.5	28.3	1.95	1.60	86.0	49.80	6,664	117.00	43.50	68.00
1979-0	61,666	2.40	147.8	30.1	144.6	118.8	29.0	2.03	1.65	87.5	59.50	7,363	114.00	34.30	62.60
1980-1[1]	59,362	2.21	131.0	33.3	138.9	103.6	27.4	1.81	1.53	90.6	70.90	8,166	113.00	50.20	65.20
1981-2[1]	60,212	2.38	143.1	25.4				1.81		93.2					
1982-3															

[1] Preliminary. [2] Roughage-consuming animal units fed annually. [3] Price of hay sold baled, for year beginning July.

Source: Economic Research Service, U.S.D.A.

U.S. Types of Hay Production & Farm Stocks In Millions of Short Tons

Year	Production Alfalfa & Mixtures	 All Other	 All Hay	 Corn for Silage[1]	 Sorghum[1] Silage	Farm Stocks Jan. 1	 May 1
1971	77.2	52.0	129.1	109.3	11.0	87.7	22.2
1972	78.0	50.6	128.6	109.3	9.9	89.4	25.5
1973	79.1	55.6	134.2	114.3	9.5	88.8	24.3
1974	74.7	52.5	126.4	115.7	7.3	93.2	25.4
1975	78.0	54.2	132.4	116.1	7.5	84.7	18.5
1976	69.8	50.2	120.1	118.5	7.3	86.2	25.5
1977	80.4	50.9	132.2	117.7	9.2	77.4	19.5
1978	87.3	56.5	143.8	118.1	7.9	92.1	24.2
1979	88.3	59.5	147.8	114.9	9.0	99.1	30.1
1980	79.9	51.1	131.0	111.0	7.0	103.2	33.3
1981[2]	83.7	59.4	143.1	116.2	9.1	92.0	25.5
1982[2]						99.9	

[1] Not included in all tame hay. [2] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

Production of All Hay in the United States by Important States In Millions of Tons

Year	Calif.	Idaho	Ill.	Iowa	Mich.	Minn.	Mo.	No. Dak.	Nebr.	N.Y.	Ohio	Pa.	So. Dak.	Wis.	Texas
1971	7.9	3.8	3.2	6.7	2.7	8.2	5.4	4.9	6.9	5.4	3.2	4.4	5.7	11.1	4.1
1972	8.2	3.7	3.4	7.0	3.1	8.2	5.5	5.1	7.1	4.5	3.1	3.8	7.3	10.2	3.9
1973	7.9	4.1	3.3	7.3	3.4	8.0	5.9	4.2	7.5	5.2	3.3	4.3	5.6	10.6	5.8
1974	7.7	4.4	3.2	6.5	3.0	7.5	5.4	4.7	6.3	5.3	3.0	4.2	5.2	10.6	5.1
1975	7.6	4.4	3.5	6.9	3.3	8.0	5.6	5.3	6.5	5.1	3.6	4.3	5.7	10.6	5.2
1976	7.6	4.2	3.5	6.7	3.1	5.8	4.9	4.0	6.0	5.4	3.6	4.1	2.8	8.1	5.4
1977	7.7	4.5	3.7	7.4	2.9	8.1	5.7	3.2	7.5	4.6	3.6	3.9	6.3	12.0	4.7
1978	7.0	4.7	3.6	8.5	3.9	8.8	6.0	6.3	7.5	5.3	3.9	4.3	8.3	11.6	5.4
1979	7.3	4.1	3.8	8.7	3.8	8.9	6.2	5.7	7.6	5.5	3.6	4.3	7.6	12.6	7.1
1980	7.7	4.4	3.6	8.0	3.8	7.1	4.5	2.5	7.1	5.8	3.6	4.2	5.4	12.5	5.5
1981[1]	7.9	4.3	3.5	8.2	3.9	8.2	6.8	4.8	7.2	5.3	3.5	4.5	5.8	11.1	7.0
1982															

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

Average Price Received by Farmers for All Hay (Baled) on the 15th of Month In Dollars Per Ton

Crop Year	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	Average[1]
1971–2	25.60	24.60	24.10	24.30	24.50	24.90	25.30	26.10	29.20	29.70	29.00	28.00	28.00
1972–3	31.30	30.90	28.50	29.30	29.80	30.30	31.00	33.00	34.60	35.40	35.40	33.90	31.30
1973–4	37.50	35.20	36.30	39.00	43.10	46.20	46.80	46.00	47.10	47.10	45.40	44.40	41.60
1974–5	54.00	47.70	48.20	51.10	51.90	51.50	50.30	50.70	50.10	49.30	49.70	52.40	50.90
1975–6	56.30	53.60	51.20	51.00	50.80	50.30	50.20	51.60	52.70	54.30	54.10	54.10	52.10
1976–7	64.10	59.60	59.00	58.70	60.80	60.10	59.00	59.00	60.90	62.70	63.90	63.20	60.20
1977–8	68.10	61.30	56.80	52.50	50.00	48.20	48.40	49.50	50.50	51.80	51.40	51.40	53.70
1978–9	55.30	51.20	49.20	49.00	47.80	47.10	46.40	47.30	48.90	50.70	50.20	49.90	49.80
1979–0	65.60	58.00	56.00	57.50	58.60	60.80	58.50	59.70	59.10	60.00	57.40	60.10	59.50
1980–1[2]	69.10	64.00	66.50	68.40	70.40	75.80	74.60	75.20	72.80	72.50	69.80	68.20	70.90
1981–2[2]	77.60	69.80	65.70	63.90	62.90	64.00	64.10	65.90	68.70	70.40	70.90	73.40	
1982–3													

[1] Weighted average by sales. [2] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

Heating Oil

U.S. distillate fuel oil refinery production in 1981 averaged 2,616 thousand barrels per day, a 2 percent decline from the 2,661 thousand barrels per day average in 1980. Imports of distillate fuel oil averaged 167 thousand barrels per day in 1981, an 18 percent increase from the 1980 average of 142 thousand. Heating oil is produced from distillate fuel oils.

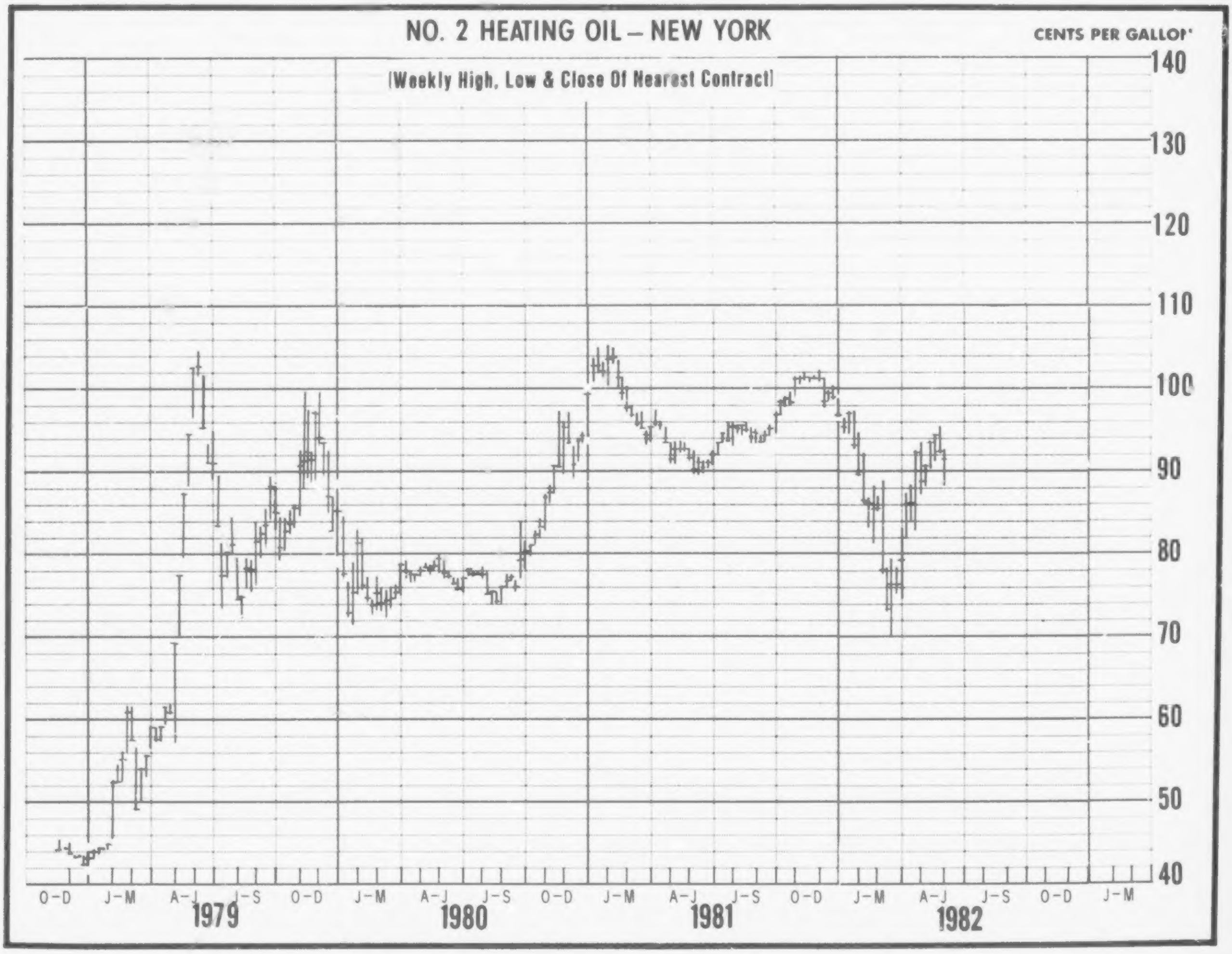
In 1981, refiners' average selling price of heating oil to resellers and retailers was 99.3 cents per gallon, up 23 percent from 1980. The average 1981 price of heating oil paid by distributors was 102.6 cents per gallon, up 25 percent from 1980. The average selling price to residential customers in 1981 was 120.5 cents per gallon, up 23 percent from 1980.

During 1981, consumption of distillate fuel oil fell more than 2 percent below the 1980 level. However, consumption in 1982 was projected to rise 3 percent, primarily because of an expected decline in inflation-adjusted prices. Nevertheless, the increase in distillate consumption was projected to be more than offset by expected declines in use of residual oil and motor gasoline—6 and 1 percent, respectively.

Distillate fuel oil prices began to weaken in early 1982, though prices regained some of the "lost ground" in spring 1982. The overall price decline was attributed to U.S. and world-wide economic weakness. The reduction in crude oil prices more than offset the effect on distillate heating oil prices of the colder than normal U.S. 1981/82 winter. OPEC responded to the declining crude prices by curtailing its production. The cuts in OPEC production actually started in the late winter period. OPEC crude oil output during November 1981 had averaged 20.6 million barrels per day, a decrease of 0.6 million barrels per day from the previous month. Average production by Arab members of OPEC was 14.0 million barrels per day, down 1.0 million barrels per day from the October 1981 level. An OPEC meeting in early 1982 resulted in further production cuts bringing total OPEC production to below 18.0 million barrels per day.

Futures Markets

Heating oil futures are traded on the New York Mercantile Exchange (NYMEX). Gasoil (heating oil) futures are traded on the International Petroleum Exchange (IPE) in London.



Month End Open Interest of Heating Oil[1] Futures in New York In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	FUTURES TRADING BEGAN NOV. 14, 1978										12	55
1979	327	200	118	299	370	485	1,165	1,280	1,894	1,952	2,221	1,973
1980	2,186	2,590	2,032	2,324	2,622	2,948	3,286	5,889	8,365	11,884	13,519	11,556
1981	11,792	12,040	13,256	14,893	17,919	16,822	19,220	28,102	36,996	35,519	33,517	31,585
1982	22,042	15,655	21,121	18,502								

[1] No. 2 heating oil. *Source: N.Y. Mercantile Exchange*

Volume of Trading of Heating Oil Futures[1] in New York In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	FUTURES TRADING BEGAN NOV. 14, 1978										37	79	116
1979	365	515	182	369	502	1,377	2,156	2,205	2,847	5,895	9,371	8,010	33,804
1980	8,512	8,427	5,146	4,798	3,421	5,923	6,074	11,564	27,430	40,525	53,098	63,366	238,284
1981	67,368	58,514	55,299	65,350	58,933	76,580	86,394	100,102	99,790	121,455	78,972	126,749	995,532
1982	165,079	148,794	176,373	146,821									

[1] No. 2 heating oil. *Source: N.Y. Mercantile Exchange*

High, Low & Closing Prices of January Heating Oil Futures[1] in N.Y. In Cents per Gallon

Year of Delivery		Year Prior to Delivery[2]												Life of Delivery Range
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.[2]	
1980	High	—	—	69.50	70.20	102.50	106.50	91.00	88.00	94.00	95.30	102.75	99.75	106.50
	Low	—	—	59.25	69.50	90.00	91.50	74.75	78.00	83.20	83.00	92.75	82.75	59.25
	Close	—	—	69.50	70.00	102.50	92.25	80.50	85.50	89.00	95.30	97.00	82.75	—
1981	High	—	—	—	94.00	93.25	91.00	86.50	82.00	87.50	90.25	99.00	97.25	99.00
	Low	—	—	—	88.00	90.25	85.90	81.50	78.45	79.00	83.15	88.50	89.25	78.45
	Close	—	—	—	92.50	91.00	86.60	81.55	81.12	84.55	89.50	95.62	96.90	—
1982	High	—	114.00	113.10	110.70	103.40	101.10	103.75	103.05	99.35	102.35	102.85	101.75	114.00
	Low	—	113.75	109.50	101.00	100.10	97.00	99.35	98.10	96.70	99.00	101.50	96.95	96.70
	Close	—	114.50	109.50	102.00	100.95	99.90	102.35	98.19	98.89	102.06	101.78	97.10	—
1983	High	—	—	85.00	95.75									
	Low	—	—	82.00	85.50									
	Close	—	—	85.00	94.40									

[1] No. 2 heating oil. [2] Contract expires the last business day of the previous calendar month quoted. *Source: N.Y. Mercantile Exchange*

U.S. Gross Input to Crude Oil Distillation Units In Millions of Barrels of 42 Gallons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1969	303.8	299.3	325.7	312.1	326.2	324.4	339.1	334.8	324.3	325.7	321.6	342.7	3,880
1970	336.9	304.8	335.9	318.4	324.0	326.2	335.5	341.7	330.3	336.6	330.6	346.7	3,968
1971	344.9	312.3	345.1	336.2	332.8	344.5	355.0	352.4	334.0	345.5	333.6	351.5	4,088
1972	353.0	329.3	351.7	335.5	355.8	355.2	368.4	369.4	363.4	368.0	355.5	375.5	4,281
1973	377.9	341.2	378.2	366.2	380.7	385.9	395.2	391.7	376.8	395.5	371.2	376.6	4,537
1974	373.2	326.5	368.7	371.6	400.4	398.8	414.1	409.1	380.0	398.3	386.0	404.9	4,632
1975	395.8	353.9	384.3	368.3	384.7	385.6	414.9	416.9	401.5	397.3	394.6	411.4	4,709
1976	403.6	388.1	412.2	396.4	413.4	427.7	446.1	446.3	425.3	428.0	437.3	457.0	5,081
1977	453.4	425.5	456.2	438.3	463.1	457.9	471.1	465.9	457.8	466.3	449.2	463.5	5,468
1978	450.1	401.4	448.3	426.6	472.4	451.5	470.5	483.8	462.2	475.9	470.6	487.6	5,501
1979	467.4	409.1	449.1	445.0	457.0	453.5	477.9	474.0	447.2	458.0	446.8	471.8	5,459
1980[1]	453.5	421.8	434.0	412.9	423.4	421.7	421.9	412.3	407.9	403.0	403.4	432.4	5,049
1981[1]	417.6	369.7	391.4	368.5	389.2	381.9	389.9	409.3	382.5	383.3	378.2	395.1	4,657
1982													

[1] Preliminary. *Source: Bureau of Mines*

HEATING OIL

Average Price of Distillate (Middle) No. 2 Fuel Oil[1] Index (1967 = 100)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1973	113.9	124.1	129.1	130.1	133.8	137.4	141.8	143.3	145.6	147.7	157.3	171.7	139.7
1974	194.8	234.1	251.8	257.9	269.2	279.7	288.9	294.8	298.8	297.9	296.0	300.1	272.0
1975	299.1	297.5	294.6	294.9	296.1	301.3	308.3	312.9	318.2	322.9	330.8	336.3	309.4
1976	336.7	339.3	335.3	331.8	328.5	329.2	332.2	336.2	338.9	341.2	344.3	349.8	337.0
1977	359.2	369.6	378.0	384.4	387.5	387.5	388.6	389.1	389.3	389.6	392.4	394.4	384.1
1978	396.7	398.6	394.8	393.3	393.3	393.3	393.2	393.6	394.0	400.0	407.6	418.0	398.0
1979	425.7	432.6	451.9	477.9	504.8	542.3	593.1	632.8	680.6	709.9	715.3	719.9	573.9
1980	739.3	793.5	837.7	858.9	964.8	860.9	870.2	875.6	873.2	868.4	873.4	891.1	850.6
1981	935.4	1,000.3	1,082.8	1,105.4	1,092.5	1,092.2	1,079.8	1,076.7	1,067.8	1,053.4	1,044.6	1,057.1	1,057.0
1982	1,064.4												

[1] Barge lots, f.o.b. refinery or terminal, excluding all fees & taxes. *Source: Bureau of Labor Statistics* (0573)

Average Wholesale Price of Kerosene (Light Distillate)—No. 1 Fuel Index (1967 = 100)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1973	112.1	120.4	121.2	123.4	122.9	126.9	128.6	129.4	130.0	135.6	135.9	145.9	128.0
1974	154.3	184.8	198.7	209.4	217.6	233.2	241.7	250.2	256.8	254.7	261.4	257.9	226.7
1975	253.7	267.2	274.9	273.6	280.6	284.6	283.7	299.1	297.9	299.4	304.2	307.8	285.6
1976	310.5	316.6	313.9	311.2	306.7	303.8	305.4	309.2	311.5	316.0	320.2	323.2	312.3
1977	326.1	339.7	346.9	352.4	355.5	358.0	360.9	363.2	364.0	375.1	379.4	381.3	358.5
1978	383.0	388.2	388.4	387.9	390.7	391.4	393.1	394.4	395.8	397.6	398.4	403.0	392.7
1979	407.5	412.7	419.1	433.0	465.5	504.1	533.4	588.4	632.9	675.2	696.6	706.3	539.6
1980	733.9	776.9	834.6	862.5	870.5	878.4	892.7	903.1	903.2	896.3	896.8	911.4	863.4
1981	932.1	972.0	1,041.0	1,080.9	1,084.1	1,078.9	1,067.5	1,052.6	1,044.6	1,042.0	1,041.4	1,036.8	1,039.4
1982	1,043.1												

Source: Bureau of Labor Statistics (0572)

Stocks of Distillate Fuel in the U.S., First of the Month In Millions of Barrels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Residual Fuel —Oil Stocks— Jan. 1	Residual Fuel —Oil Stocks— July 1
1969	173.2	130.6	106.6	99.6	99.8	110.9	132.6	159.1	183.5	197.7	208.0	201.0	65.4	60.5
1970	171.7	130.7	111.5	101.0	102.1	115.8	137.5	163.5	188.2	205.7	216.4	218.1	58.4	46.0
1971	195.3	158.7	128.7	112.9	113.7	125.8	145.8	172.4	197.0	210.1	223.0	214.8	54.0	58.7
1972	190.6	160.1	122.2	101.8	98.3	112.9	128.8	155.6	174.7	190.3	195.6	182.6	59.7	56.1
1973	154.3	131.0	113.3	111.3	114.7	119.1	137.9	160.9	177.3	190.2	203.0	200.2	55.2	51.8
1974	196.5	181.2	149.2	128.9	125.6	141.8	160.7	182.5	198.7	208.3	209.9	212.9	53.5	57.9
1975	200.1	199.8	176.7	161.1	146.3	152.1	163.3	181.5	197.4	220.8	226.2	[illegible]	59.7	69.7
1976	208.8	165.5	150.5	138.3	137.3	147.1	165.1	190.9	218.0	232.3	235.6	[illegible]	74.1	64.3
1977	186.0	143.0	133.3	141.9	148.3	162.2	178.9	204.9	229.8	252.8	267.4	[illegible]	72.3	71.9
1978	250.3	213.3	165.7	137.9	136.2	144.6	157.3	180.5	200.2	220.7	233.1	233.2	90.0	72.0
1979[1]	216.5	175.7	127.1	112.7	115.0	123.1	141.4	171.3	195.4	220.3	231.1	236.6	90.0	71.9
1980[1]	228.7	[illegible]	191.5	177.7	177.0	183.1	195.8	213.8	226.3	232.3	225.7	[illegible]	95.9	87.7
1981[1]	205.4	180.0	172.6	164.7	164.7	171.9	180.2	186.7	200.3	206.8	201.2	[illegible]	91.5	70.1
1982[1]	190.2												78.3	

[1] Preliminary. *Source: Bureau of Mines*

U.S. Production of Distillate Fuel Oil In Millions of Barrels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1976	84.8	85.9	86.6	79.7	84.9	86.6	91.8	92.4	88.4	92.9	95.4	100.9	1,070.2
1977	104.5	103.5	98.4	89.8	97.1	95.7	99.1	101.4	99.3	104.2	100.2	103.0	1,196.3
1978	95.1	82.7	93.5	88.8	100.8	93.3	96.8	102.2	95.6	102.3	101.0	104.2	1,156.1
1979[1]	93.2	80.2	92.8	88.1	95.0	94.1	102.5	103.3	101.0	100.7	97.7	99.9	1,150.8
1980[1]	93.7	80.6	79.5	73.9	76.6	79.4	74.5	82.3	78.3	77.2	81.9	88.7	954.9
1981[1]	92.6	78.7	77.0	72.5	76.1	75.0	74.5	82.3	78.3				
1982													

[1] Preliminary. *Source: Dept. of Energy*

U.S. Imports of Distillate Fuel Oil In Millions of Barrels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1976	5.1	6.3	4.8	2.9	3.0	4.5	3.9	4.1	4.5	4.5	4.0	6.1	53.5
1977	10.8	18.6	17.0	4.6	3.1	4.0	5.9	5.0	5.1	4.6	5.6	7.0	91.3
1978	6.1	5.9	6.0	3.0	3.9	4.4	4.6	4.4	4.9	5.5	6.7	7.9	63.3
1979[1]	7.0	5.5	5.5	4.5	5.8	5.4	6.8	6.7	3.8	6.6	7.0	7.1	70.5
1980[1]	5.5	6.4	5.5	4.4	3.9	3.2	3.6	2.4	3.0	3.6	4.0	5.2	51.9
1981[1]	8.5	9.1	4.5	3.5	5.1	6.0	5.5	4.9	3.9	3.6	3.4	2.9	61.0
1982													

[1] Preliminary. *Source: Dept. of Energy*

U.S. Domestic Consumption of Distillate Fuel Oil In Millions of Barrels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1976	133.2	107.2	103.5	83.6	78.1	73.1	69.9	69.4	78.6	94.0	111.4	144.7	1,146.7
1977	158.2	131.8	106.7	88.1	86.2	83.1	79.1	81.6	81.4	94.1	102.6	130.4	1,223.3
1978	138.2	135.8	127.3	93.3	96.2	85.1	78.2	86.8	79.9	95.4	107.5	128.8	1,252.6
1979[1]	140.8	134.2	112.4	90.2	92.7	81.2	79.1	85.9	79.8	96.2	99.3	114.9	1,208.5
1980[1]	115.7	107.5	98.3	78.9	74.4	69.9	69.0	66.2	77.7	90.5	88.5	112.1	1,049.0
1981[1]	126.8	95.1	89.6	76.2	74.2	73.1	73.8	73.9	75.9	86.6	86.6	101.0	1,032.8
1982													

[1] Preliminary. *Source: Dept. of Energy*

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Hides and Leather

U.S. production of cattlehides derived from total commercial slaughter increased 3 percent in 1981 from the 1980 level, to 35.0 million. Raw calf skin production in 1981 derived from total commercial slaughter increased 8 percent in 1981, to 2.8 million. The substantial reduction in U.S. cattle herds since 1975 reversed direction in 1980. Although high interest rates have slowed the rate of herd expansion, both slaughter and cattle numbers are expected to rise at least through 1985.

U.S. cattlehide exports in 1981 totaled about 17.7 million pieces, off 9 percent from the 1980 total, and represented about 50 percent of 1981 hide production. Japan was the leading importer of U.S. cattlehides, accounting for almost 7.4 million pieces. The Republic of Korea imported 3.3 million U.S. cattlehides in 1981. These two countries together accounted for 60 percent of total U.S. hide exports in 1981. Other major importers of U.S. cattlehides in 1981 were Mexico and Taiwan, who accounted for 2.2 million and about 1.3 million pieces, respectively. U.S. exports of calf skins in 1981 totaled 1.53 million, of which 916 thousand were exported to Japan.

Exports of U.S. cattlehides in the first quarter (Jan.–Apr.) of 1982 totaled 5.145 million pieces versus 4.564 million in the corresponding period of 1981. Calf skin exports totaled 419 thousand pieces versus 428 thousand in the first quarter of 1981.

Heavy Native Steer prices, f.o.b. River points, as quoted in the *Journal of Commerce* started 1981 at 43¼ cents per pound and advanced to a 1981 peak of 50¼ cents by late April. The low price for the year of 40 cents per pound was reached in late August, and prices ended the year at 41 cents per pound. Light Native Cow prices at the same locations ranged between a low of 43½ cents per pound in late June to a 1981 high of 60 cents per pound in late December. Raw hides and skins are the major components of tanners' direct costs and can be as much as 70 percent of total costs.

The leather tanning and finishing industry comprises establishments primarily engaged in tanning, currying, and finishing raw or uncured hides and skins into leather. This industry also includes leather converters and dealers who buy hides and skins and have them processed under contract by tanners or finishers. After three consecutive years of large declines in unit shipments, the quantity of leather shipped by U.S. tanners in 1981 increased by an estimated 10.8 percent, to 19.5 million equivalent cattlehide units. Cattlehide leather accounted for an estimated 16.1 million units, or 83 percent of the total.

U.S. exports of leather in 1981 were estimated to have increased slightly, with the Republic of Korea the leading importer from the U.S., followed by China, Canada, Hong Kong, and Mexico. U.S. imports of leather soared in 1981, aided by the strong U.S. dollar. Argentina was the major single exporter of leather to the U.S.

Only marginal real growth was expected for the leather tanning and finishing industry in 1982, but the 5-year outlook appears more promising. Factors which would contribute to industry growth include: (1) ample supplies and consequent lower costs for raw cattlehides; (2) industry efforts to increase U.S. leather exports; (3) success of industry and U.S. government actions to induce other countries to eliminate protective trade restrictions on their raw material supplies and to reduce tariff and non-tariff barriers on U.S. leathers; and (4) establishment of more practical and cost-effective environmental regulations, which will allow the industry to invest more capital in new, relocated plants and equipment. Factors that would limit real industry growth include: (1) high raw material prices resulting from increasing foreign demand for U.S. cattlehides; (2) protectionist trade policies of other countries on their raw material exports and leather imports; (3) further growth in leather and leather product imports made more competitive by a strong U.S. dollar and; (4) high interest rates, which could restrict access to working capital.

U.S. production of nonrubber footwear continued its steady decline, to an estimated 375 million pairs in 1981, 5.5 percent below the 397 million pairs produced in 1980 and the lowest level of production since 1934. High interest rates and reduced consumer purchases contributed to the 1981 production decline.

World Production of Bovine Hides and Skins In Thousands of Units of Metric Tons

Year	Argentina	Australia	Brazil	Canada	Colombia	France	Germany		Mexico	Italy	Poland	South Africa	Turkey	Un. Kingdom	United States	U.S.S.R.
							East	West								
1970–74	246.7	129.3	331.4	89.7	64.9	143.6	44.0	145.8	80.0	102.5	56.5	67.7	46.0	94.7	1,012	675.2
1975	277.4	185.5	338.0	111.7	67.2	163.3	47.3	155.5	107.7	91.4	76.1	66.9	57.0	127.4	1,199	695.3
1976	320.1	208.0	339.0	117.6	76.5	174.0	48.2	167.1	108.0	93.6	86.1	55.3	50.1	111.6	1,223	725.6
1977	339.2	219.5	375.0	115.3	73.0	162.2	49.1	161.1	114.6	95.5	80.4	58.8	52.1	102.9	1,209	735.0
1978[1]	370.8	202.1	336.0	106.1	78.2	162.8	49.7	164.5	124.0	91.9	75.9	65.1	53.4	99.0	1,134	741.0
1979[1]	355.2	174.0	330.0	94.6	81.3	163.0	50.2	170.4	122.0	91.9	77.2	69.2	53.4	95.0	964.1	760.0
1980																

[1] Preliminary. *Source: Foreign Agricultural Service, U.S.D.A.*

Salient Statistics of Hides & Leather in the United States

Year	New Supply of Cattle Hides — Domestic Slaughter — Federally inspected	Uninspected[8]	Total Production	Net Exports	Total New Supply	Wholesale Prices—F.O.B. Pts. Calf[2] Skins ¢ Lb.	Hides[3]; Steers, Heavy '67 = 100	Leather Production[4] Thous. Equiv. Hides	Leather Exports Glove & Garment	Upper & Lining	Wholesale Leather Prices Sole[5]	Upper[6]	Footwear Production[7]	Export
	Thousands of Equivalent Hides								Thous. Sq. Ft.		1967 = 100		Mil. Pairs	
1971	31,419	4,861	36,280	15,694	20,586	29.4	14.5	20,520	——82,944——		114.4	81.8	536	2.1
1972	32,267	4,213	36,480	17,705	18,775	56.3	29.6	20.084	——117,556——		157.5	106.7	527	2.3
1973	30,521	4,179	34,700	16,177	22,728	62.2	34.3	17,768	——120,104——		184.6	119.5	490	3.6
1974	33,319	4,381	37,700	17,924	19,776	64.4	23.1	16,829	——148,565——		158.8	N.A.	453	4.0
1975	36,904	4,896	41,800	20,329	21,471	35.0	23.4	N.A.	——184,104——		151.1	N.A.	413	4.3
1976	38,992	4,590	43,582	24,318	19,264	75.5	33.8	N.A.	——203,707——		197.9	N.A.	423	6.0
1977	38,717	3,139	41,856	23,569	18,287	91.4	37.0	N.A.	——206,276——		206.1	N.A.	414	5.4
1978	36,948	2,604	39,552	24,101	15,451	134.6	47.2	N.A.	——208,799——		235.2	N.A.	419	6.2
1979	31,504	2,173	33,678	23,063	10,615	168.7	614.4	N.A.	——187,665——		329.6	N.A.	399	7.6
1980	31,642	2,165	33,807	18,640	15,167	109.8	385.9	N.A.	——192,597——		283.8	N.A.	397	9.8
1981[1]	32,819	2,134	34,953	18,701	16,252	N.A.	363.0	N.A.	——192,193——		306.7	N.A.	380	9.7
1982														

[1] Preliminary. [2] Packer, heavy, 9½ to 15 pounds. [3] Native, over 53 pounds. Data prior to 1979 are in cents per pound. [4] Cattle hides & side kip. [5] Bends, light, f.o.b. tannery. [6] Chrome calf, B&C grades, f.o.b. tannery. [7] Other than rubber. [8] Includes farm slaughter; diseased & condemned animals & hides taken off fallen animals. *Sources: Tanners' Council of America; Bureau of Labor Statistics; Dept. of Commerce*

U.S. Imports of Sheep and Lamb Skins In Thousands of Pieces

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1973	910	1,437	1,883	1,547	1,219	804	1,598	1,157	540	684	562	494	12,835
1974	765	791	1,468	1,308	1,839	2,375	1,232	1,728	1,449	1,077	1,167	533	15,732
1975	1,161	1,515	1,615	1,603	1,162	1,024	1,668	1,096	1,372	1,311	1,145	849	15,520
1976	929	959	2,793	2,216	1,289	2,366	1,494	1,336	1,414	817	523	467	16,603
1977	815	1,166	1,942	1,355	2,260	1,724	1,601	1,385	1,295	482	155	1,288	15,468
1978	841	1,850	2,080	2,541	2,245	1,577	1,664	1,323	1,093	920	935	739	17,807
1979[1]	1,321	1,581	1,835	1,449	2,967	1,425	1,080	1,331	804	514	598	624	15,529
1980[1]	779	641	1,074	1,378	1,466	1,027	640	666	286	492	330	248	9,027
1981[1]	546	1,289	926	1,341	1,484	1,381	1,446	1,694	946	1,092	1,254	839	14,237
1982[1]	587												

[1] Preliminary. *Source: U.S. Department of Commerce*

U.S. Exports of Upper & Lining Leather In Thousands of Square Feet

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1973	8,746	7,872	9,254	11,311	12,618	10,873	8,154	10,353	9,919	10,184	6,459	9,563	120,104
1974	9,984	10,163	10,407	11,917	16,191	14,674	12,800	11,699	14,108	12,831	11,032	12,759	148,565
1975	14,748	12,427	13,574	14,624	16,735	18,473	13,341	16,979	14,714	17,131	16,737	12,909	184,104
1976	14,517	17,367	18,157	19,449	21,149	18,795	14,028	12,074	18,343	14,361	15,108	18,388	203,707
1977	18,630	19,272	23,315	18,338	16,714	16,205	18,612	12,276	16,838	12,807	14,980	18,240	206,276
1978	17,364	15,309	16,408	16,720	18,899	21,427	14,160	19,726	16,224	17,438	17,947	17,176	208,799
1979[1]	13,854	16,014	18,833	16,480	15,664	18,526	13,153	15,265	14,456	13,895	16,089	15,433	187,665
1980[1]	16,769	16,873	18,710	13,024	12,652	15,483	15,481	15,215	15,818	19,051	20,880	13,641	192,597
1981[1]	19,633	14,418	19,717	17,678	18,016	18,692	13,921	10,918	15,393	12,682	19,464	11,660	192,193
1982[1]	10,849												

[1] Preliminary. *Source: Tanners' Council of America*

HIDES AND LEATHER

U.S. Exports of Calf and Kip Skins In Thousands of Skins

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1974	144	169	337	184	231	189	114	101	126	136	140	292	2,163
1975	280	161	236	174	230	115	166	159	193	284	197	209	2,403
1976	195	151	247	262	212	122	161	159	133	217	145	158	2,162
1977	194	182	144	250	174	171	246	187	249	179	196	336	2,508
1978	211	160	288	265	194	199	222	189	339	181	177	241	2,666
1979[1]	207	264	233	267	126	204	216	196	169	140	143	157	2,321
1980[1]	159	205	337	181	147	122	260	281	325	138	137	202	2,495
1981[1]	242	264	263	227	278	264	184	216	194	277	330	289	3,027
1982[1]	370												

[1] Preliminary. *Source: U.S. Department of Commerce*

Exports of Cattle Hides from the United States In Thousands of Hides

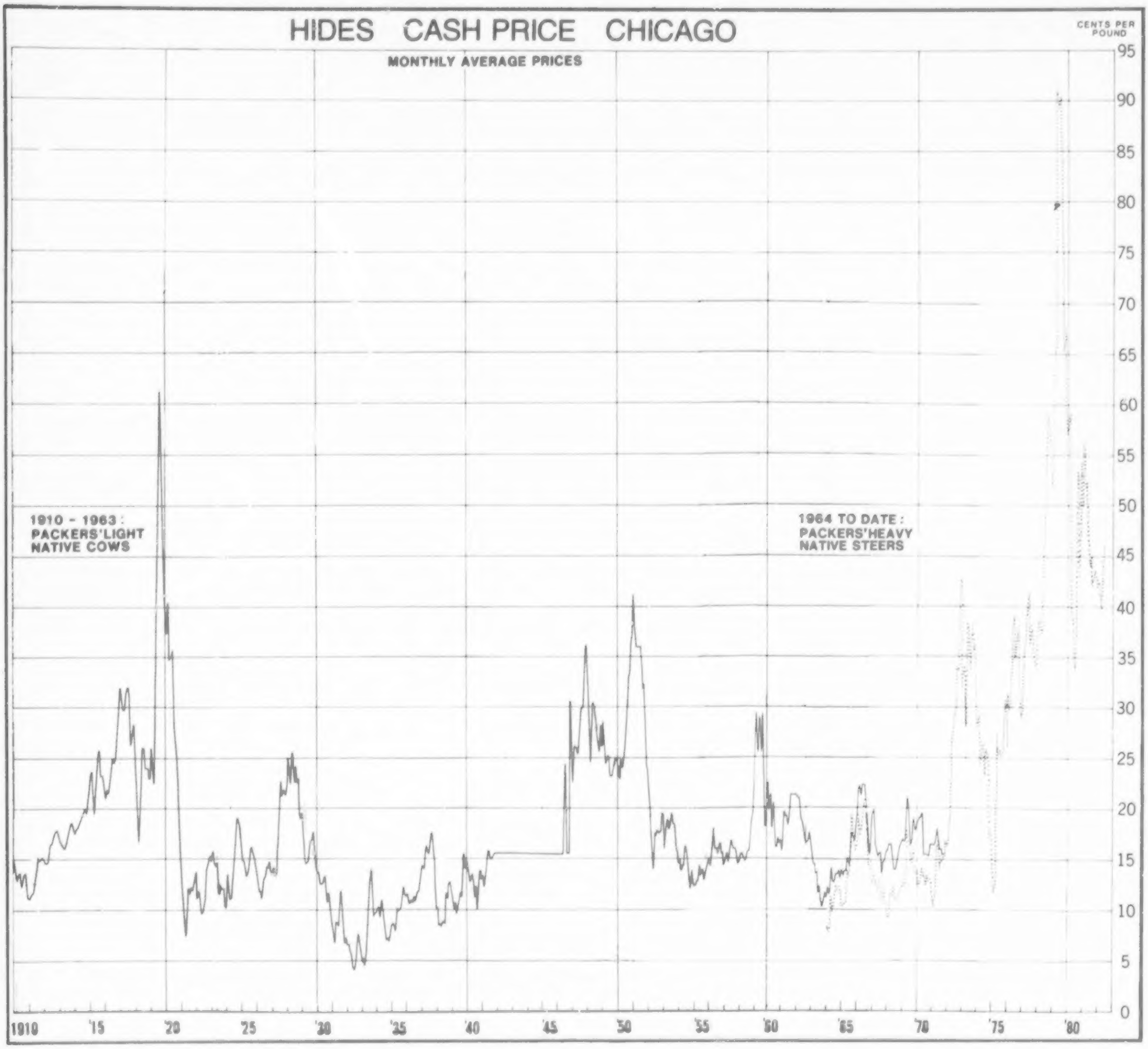
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1971	1,207	1,251	1,611	1,239	1,304	1,235	694	1,166	1,338	1,565	1,696	1,656	15,962
1972	1,272	1,153	1,686	1,210	1,437	1,317	2,152	1,324	1,290	1,893	1,733	1,524	17,589
1973	1,461	1,837	1,802	1,340	1,411	1,266	1,155	1,100	1,229	1,463	1,412	1,391	16,867
1974	1,423	1,500	1,462	1,567	1,554	1,123	1,615	1,529	1,423	1,619	1,708	1,905	18,428
1975	1,663	1,810	1,989	2,045	1,834	1,719	1,551	1,548	1,714	1,678	1,965	1,753	21,269
1976	2,172	1,658	2,407	2,386	2,075	2,030	2,002	2,073	2,016	2,040	2,042	2,282	25,270
1977	2,276	1,998	2,289	2,167	2,016	2,023	2,189	1,937	2,157	1,631	1,572	2,235	24,488
1978	1,893	2,021	2,270	2,375	2,122	2,078	1,725	2,176	1,779	1,922	1,754	2,676	24,791
1979	1,635	2,056	2,405	2,130	2,358	2,034	1,627	2,018	1,993	1,830	2,041	1,603	23,731
1980	1,308	1,705	1,737	1,671	1,914	1,650	1,509	1,703	1,510	1,608	1,542	1,711	19,568
1981	1,536	1,749	1,737	1,565	1,545	1,560	1,775	1,496	1,521	1,561	1,723	1,936	19,703
1982	2,043												

Source: U.S. Department of Commerce

U.S. Production of Footwear (Shoes, Sandals, Slippers, Athletic, Etc.) In Millions of Pairs

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1970	47.6	47.5	50.2	48.6	46.3	47.9	42.9	47.3	47.7	49.0	40.9	43.4	562.3
1971	44.8	44.9	50.3	46.8	44.1	46.7	37.6	46.3	45.7	45.1	40.7	42.9	535.8
1972	44.5	44.3	48.7	44.1	45.2	46.2	36.1	46.2	44.2	46.4	41.1	38.5	526.5
1973	42.9	41.9	46.8	41.9	41.7	41.7	32.1	43.7	39.2	45.2	38.5	34.2	490.0
1974	40.8	41.1	42.9	39.9	43.2	39.9	32.9	37.3	34.8	36.9	33.2	30.2	453.0
1975	32.7	31.2	31.6	32.8	32.7	34.1	32.2	36.2	37.7	42.4	34.6	35.0	413.1
1976	37.0	36.1	42.2	39.4	38.7	37.3	29.5	34.8	35.1	33.2	30.0	29.2	422.5
1977	34.8	34.5	37.6	34.3	35.5	36.9	26.9	37.5	35.6	36.4	35.9	33.2	418.1
1978	34.5	34.8	39.9	35.8	39.5	36.8	26.1	37.1	34.2	36.3	33.8	30.2	418.9
1979[1]	35.7	33.4	37.0	31.9	35.4	30.5	24.4	33.8	31.0	34.9	31.3	28.7	398.9
1980[1]	35.5	33.7	34.4	33.5	34.8	33.1	27.9	31.5	33.5	37.2	30.4	29.5	396.9
1981[1]	31.4	30.7	34.3	33.0	31.9	30.4	27.0	30.7	32.9	35.0	30.3		
1982													

[1] Preliminary. *Source: U.S. Department of Commerce*



Index Price of Hides (Packer Heavy Native Steers)[1]—F.O.B. Shipping Point Index—1967 = 100[2]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1970	12.3	12.8	12.8	14.1	13.4	13.4	12.3	13.5	13.0	13.1	13.1	11.0	12.9
1971	10.4	11.5	11.5	15.8	16.8	14.1	14.8	14.8	15.5	15.3	16.8	16.3	14.5
1972	17.8	19.0	23.3	25.5	28.0	29.3	29.3	34.0	33.5	40.5	43.0	32.0	29.6
1973	34.0	33.5	28.3	38.3	36.3	33.8	36.3	38.3	35.5	36.3	32.8	28.2	34.3
1974	29.3	—	24.1	26.3	26.3	23.3	25.8	25.3	24.5	17.3	17.5	14.3	23.1
1975	11.8	12.5	16.3	27.5	25.3	25.8	25.3	25.3	25.8	28.0	30.8	26.3	23.4
1976	31.5	29.8	30.0	34.9	39.0	34.8	36.3	37.3	38.3	31.8	29.0	32.3	33.8
1977	35.8	36.3	37.3	40.1	41.3	36.3	38.1	36.8	34.8	33.8	34.8	38.0	37.0
1978	38.8	37.8	37.3	41.3	41.8	45.8	47.8	53.0	59.0	57.3	54.8	51.8	47.2
1979[2]	506.4	548.4	766.9	750.1	760.2	696.3	653.0	594.6	549.2	568.9	498.5	480.1	614.4
1980	496.7	409.3	331.5	320.5	283.6	321.0	369.0	448.0	361.4	412.9	455.9	420.6	385.9
1981	375.1	344.1	356.1	405.8	385.8	364.9	351.7	373.6	344.3	347.7	347.2	343.4	363.0
1982	353.6	346.0	325.8										

[1] Over 53 pounds. [2] Data prior to 1979 are in cents per pound. *Source: Bureau of Labor Statistics* (0411–0111.99)

HIDES AND LEATHER

U.S. Imports and Exports of All Cattle Hides In Thousands of Hides

	Imports		U.S. Exports—By Country of Destination												
Year	Total	From Canada	Total	Canada	France	W. Germany	Japan	Mexico	Netherlands	Poland	Spain	Romania	South Korea	Czech.	Italy
1970	385	323	15,222	761	287	714	6,206	2,046	332	152	260	449	271	499	335
1971	275	245	15,962	883	545	576	6,010	2,195	305	473	842	571	357	694	62
1972	292	283	17,578	893	753	585	7,246	1,776	299	545	758	1,201	411	852	178
1973	694	661	16,866	764	548	535	6,840	2,005	129	719	503	1,006	821	807	426
1974	520	484	18,428	790	327	396	6,642	2,500	153	639	554	1,777	1,252	638	250
1975	958	954	21,269	805	504	315	7,108	2,362	219	787	948	1,226	2,203	877	565
1976	962	958	25,270	1,057	816	518	9,356	1,708	326	389	957	1,651	3,270	678	1,561
1977	932	926	24,489	859	769	435	8,425	1,967	417	433	940	1,472	3,611	680	1,048
1978	704	694	24,791	1,093	555	379	8,797	1,938	211	349	1,019	1,942	3,720	586	1,284
1979	673	643	23,731	1,248	691	454	7,396	2,428	324	513	892	1,317	2,526	682	2,248
1980	880	859	19,512	1,046	238	206	7,476	1,972	164	522	112	1,046	2,653	318	690
1981[3]	1,028	881	19,703	1,212	137	319	7,512	2,485	94	203	394	680	3,579	334	486
1982															

[1] Preliminary. *Source: Tanners' Council of America*

Average Factory Price of Footwear in the United States In Dollars Per Pair

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1969	4.79	4.86	4.89	5.07	4.92	4.94	4.97	5.05	5.10	4.99	4.98	5.27	4.98
1970	5.11	5.18	5.36	5.20	4.97	5.02	5.10	5.23	5.15	5.09	5.11	5.54	5.17
1971	5.39	5.37	5.41	5.40	5.18	5.21	5.38	5.21	5.16	5.17	5.13	5.45	5.29
1972	5.45	5.48	5.54	5.67	5.48	5.52	5.75	5.59	5.55	5.41	5.39	6.00	5.56
1973	6.32	6.15	6.19	6.28	6.09	6.11	6.30	6.24	6.29	6.20	6.16	6.63	6.24
1974	6.84	6.67	6.81	6.76	6.91	6.86	6.99	6.90	7.20	7.25	7.31	7.63	6.99
1975	7.48	7.64	7.50	7.43	7.63	7.63	7.49	7.43	7.45	7.46	7.63	7.29	7.50
1976	8.00	7.87	8.07	8.16	8.23	8.23	8.32	8.34	8.63	8.21	8.75	8.73	8.28
1977	8.61	8.40	8.63	8.81	8.53	8.39	8.44	8.36	8.51	8.28	8.62	9.00	8.54
1978	8.50	8.39	8.76	9.35	9.51	9.37	9.41	8.66	9.40	9.37	9.61	10.31	9.20
1979	9.73	9.84	9.68	10.23	10.00	10.48	11.74	10.31	10.30	10.46	11.15	11.47	10.60
1980	11.67	11.83	11.81	12.27	12.16	11.37	11.40	11.94	11.08	11.25	11.45	11.41	11,63
1981	11.67	11.93	12.52	12.72	13.09	13.16	12.40	13.14	13.22	13.26	12.67	12.87	12.72
1982													

[1] Preliminary. *Source: Tanners' Council of America*

U.S. Exports of Hides and Skins In Millions of Dollars

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1971	11.6	12.0	14.9	11.5	13.1	12.9	7.1	11.6	12.5	15.2	16.2	17.2	155.8
1972	13.5	12.9	19.2	15.9	19.1	19.3	32.6	24.0	24.4	36.1	40.8	37.3	292.0
1973	35.9	45.5	44.2	30.9	33.5	25.4	23.7	24.1	25.6	31.0	29.4	27.9	377.0
1974	29.0	31.2	31.8	31.6	31.9	22.5	30.0	26.7	24.6	27.9	25.5	26.4	339.1
1975	22.7	22.8	24.5	25.1	24.6	23.4	22.5	23.0	25.8	24.9	29.0	28.1	296.3
1976	34.8	28.3	42.4	45.3	51.5	43.1	44.0	45.2	44.9	48.1	46.1	48.5	522.3
1977	50.5	47.2	55.8	53.3	48.0	49.1	51.8	46.5	50.4	39.3	38.2	52.9	582.9
1978	45.5	47.6	58.5	61.3	55.4	55.8	47.5	58.8	54.4	60.1	58.5	91.2	694.6
1979	61.6	77.4	98.3	91.7	101.4	88.3	78.7	91.8	80.0	72.0	78.7	71.8	991.7
1980	60.8	75.1	78.2	59.0	61.8	49.9	45.9	52.1	48.8	53.0	50.5	58.5	693.7
1981	57.5	64.4	64.2	56.9	58.2	56.0	60.7	51.8	50.1	53.8	59.3	66.8	699.6
1982	69.70												

Source: U.S. Department of Commerce

Hogs

U.S. commercial pork production totaled 15.7 billion pounds in 1981, down 4 percent from a year earlier, but still the second largest on record. Commercial slaughter totaled around 91.5 million head, down 5 percent from a year earlier, but dressed weights averaged 1 percent higher. Federally inspected slaughter accounted for 96 percent of commercial hog slaughter in 1981. Barrows and gilts accounted for over 93 percent of the hogs slaughtered, and sows accounted for about 5 percent.

In response to lingering poor returns, hog producers continued to reduce their breeding inventory. As a result, the U.S. inventory of hogs and pigs totaled 58.7 million head on December 1, 1981, down 9 percent from a year earlier. The breeding herd was down 14 percent from a year earlier and the market hog inventory dropped 8 percent. In 1981, hog producers added only 3.5 million gilts to the breeding inventory, the fewest in the past decade.

The U.S. pig crop for 1981 totaled 93.8 million head, down 8 percent from a year earlier. As of December 1, 1981, producers indicated intentions to have 5.76 million sows farrow during December 1981–May 1982, 11 percent fewer than a year earlier. These intentions, combined with an average projected litter size, indicated a December 1981–May 1982 pig crop of 41.5 million head, down 13 percent from a year earlier. The June–November 1981 pig crop was estimated at 46.2 million head, down 6 percent from the previous year.

Commercial hog slaughter in the last half of 1982 could be 12 to 14 percent below a year earlier if producers followed through with their December intentions. Hog slaughter in the second half of the year comes primarily from the December–May pig crop.

The March 1982 USDA Hogs & Pigs report covering the 14 states (which conduct quarterly hog surveys and account for about 87 percent of the total U.S. hog and pig inventory) estimated the inventory of hogs and pigs on March 1, 1982 at 44.9 million head, 10 percent below a year earlier and 18 percent less than two years ago. Significantly, the breeding inventory was 14 percent below the March 1, 1981 level.

The reduced pig crops and lower farrowing intentions were expected to result in strong hog prices. However, a major uncertainty existed concerning the retail demand for pork because of the sluggish economy.

Futures Markets

Live hog futures are traded on the Chicago Mercantile Exchange (30,000 lb. contract), and on the MidAmerica Commodity Exchange in Chicago (15,000 lb. contract).

World Hog Numbers in Specified Countries In Millions of Head

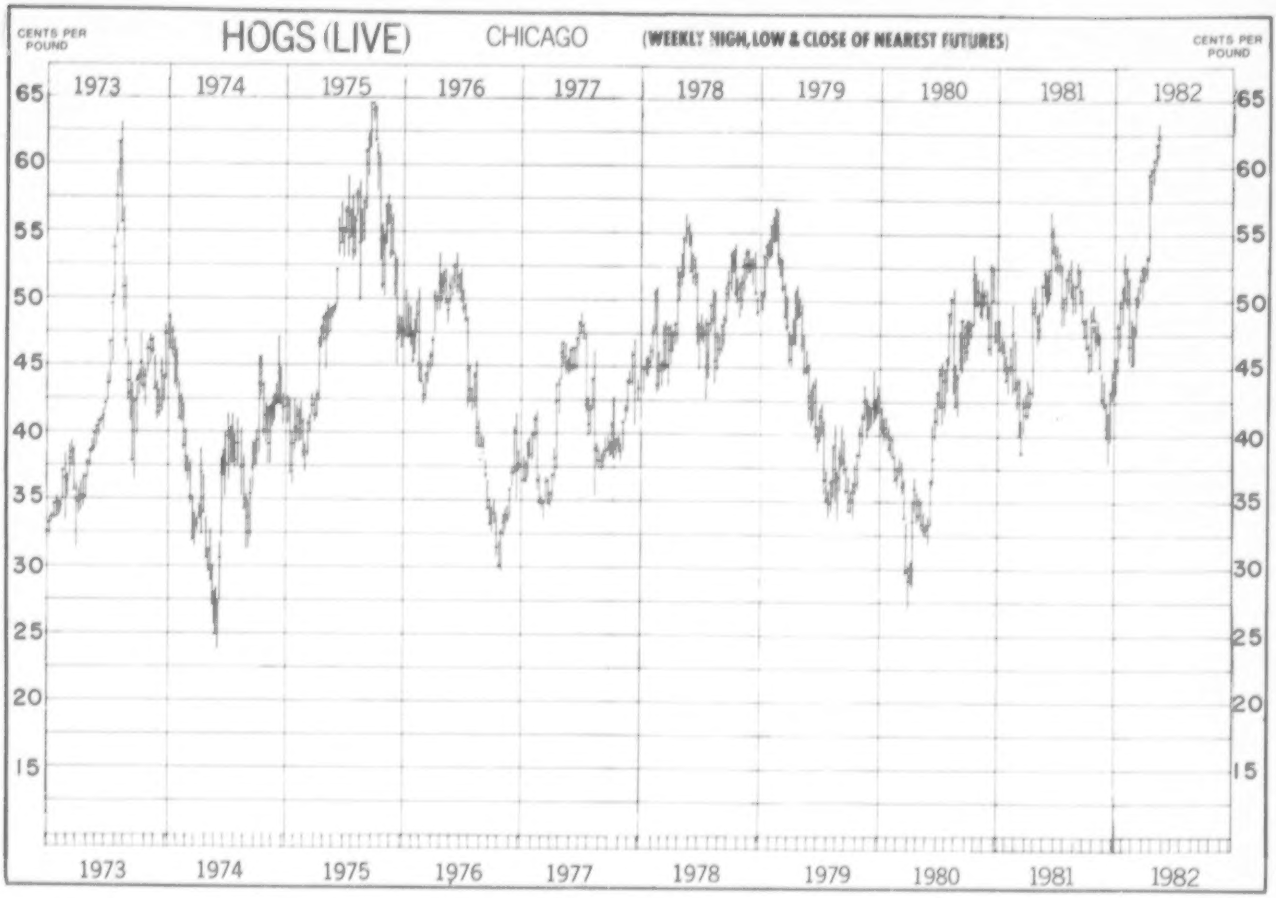
Year	Brazil	Denmark	France	W. Germany	Hungary	Italy	Japan	Mexico	Philippines	Poland	China[3]	Un. Kingdom	United States	U.S.S.R.	World
1970	31.5	8.4	10.5	19.3	5.7	9.2	6.3	10.3	12.0	14.8	220.0	8.1	57.0	56.1	599.1
1971	32.1	8.7	11.6	21.0	7.3	9.0	6.9	10.0	12.5	13.9	223.0	8.5	67.3	67.5	638.4
1972	33.0	8.7	11.3	20.0	7.6	8.2	7.0	11.0	7.7	16.9	228.0	8.9	62.4	71.4	651.1
1973	34.0	8.7	11.4	20.0	6.9	8.2	7.3	9.4	8.6	19.0	231.4	8.8	59.0	66.6	651.3
1974	35.0	8.2	11.4	20.5	8.0	8.2	8.0	11.7	9.3	21.5	234.9	9.3	60.6	70.0	671.5
1975	43.5	8.1	12.0	20.2	8.3	8.8	7.7	12.1	6.6	21.7		7.9	54.7	72.3	
1976	36.0	7.6	11.5	19.8	7.0	8.9	7.5	12.0	6.5	21.6		7.7	49.3	57.9	364.1
1977	36.8	7.9	11.5	20.6	7.9	9.1	8.1	12.3	5.7	16.8		8.2	54.9	63.1	380.3
1978	37.6	8.2	11.5	21.4	7.9	9.4	8.8	12.6	6.9	20.6		7.7	56.5	70.5	402.6
1979	36.0	9.2	11.3	22.6	8.0	8.9	9.5	12.7	7.4	21.1		8.0	60.4	73.5	416.4
1980	36.5	9.5	11.4	22.4	8.4	8.8	10.0	12.8	7.9	21.0		7.8	67.4	73.9	431.3
1981[1]	35.0	9.7	11.7	22.6	8.2	8.9	10.1	12.9	8.3	18.7	305.0	7.8	64.5	73.4	426.3
1982[2]	35.5	9.6	11.8	22.2	7.9	8.8	10.4	13.6	8.8	18.8		7.9	61.3	73.5	426.0

[1] Preliminary. [2] Estimate. [3] Mainland. *Source: Foreign Agricultural Service, U.S.D.A.*

Hogs and Pigs on U.S. Farms on December 1 In Thousands of Head

Year	Georgia	Illinois	Indiana	Iowa	Kansas	Kentucky	Minnesota	Missouri	Nebraska	No. Carolina	Ohio	South Dakota	Tennessee	Wisconsin	Total
1969	1,780	6,842	4,499	13,720	1,643	1,400	3,263	4,197	3,000	1,580	2,557	1,674	1,163	1,680	57,046
1970	2,065	7,630	5,129	16,110	2,202	1,680	3,752	5,120	3,691	1,985	2,838	2,009	1,395	1,932	67,285
1971	1,962	6,600	5,020	14,853	2,100	1,394	3,544	4,659	3,322	1,850	2,611	1,868	1,269	1,777	62,412
1972	1,884	6,650	4,850	14,200	2,100	1,255	3,550	4,350	3,300	1,739	2,320	1,739	1,050	1,475	59,017
1973	1,840	7,350	4,875	14,700	2,000	1,280	3,976	4,325	3,455	1,950	2,274	2,175	940	1,540	60,614
1974	1,590	6,500	4,300	13,400	1,750	1,100	3,700	3,900	3,050	1,890	1,950	1,700	880	1,400	54,693
1975	1,300	5,600	3,900	12,600	1,650	1,000	3,000	3,200	2,700	1,900	1,675	1,400	920	1,150	49,267
1976	1,600	6,400	4,000	14,200	1,850	1,080	3,600	3,750	3,100	1,940	1,900	1,500	1,010	1,250	54,934
1977	1,720	6,100	4,100	14,500	2,000	1,140	4,000	3,700	3,150	2,300	1,750	1,580	1,180	1,378	56,539
1978	1,800	6,550	4,400	15,100	2,000	1,150	4,100	4,100	3,650	2,350	1,900	1,620	1,300	1,650	60,100
1979	2,360	6,950	4,850	16,200	2,090	1,470	4.900	4.650	4,150	2,650	2,120	2,000	1,400	1,830	67,353
1980	2,300	6,600	4,600	16,100	1,900	1,220	5,100	3,980	3,900	2,460	2,150	1,860	1,140	1,680	64,512
1981[1]	1,520	6,450	4,100	16,300	1,770	1,040	4,300	3,400	4,100	1,980	2,050	1,710	900	1,380	58,691

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*



Salient Statistics of Pigs and Hogs in the U.S.

	Pig Crop					Value of Hogs on Farms, Dec. 1		Hog Marketings Ths. Head	Quantity Produced (Live Wt.) Mil. Lbs.	Value of Production Mil. $	Hogs Slaughtered in Thousand Head				
	Spring[2]		Fall[3]								Commercial				
	In Thousands of Head														
Year	Sows Farrowed	Pigs Saved	Sows Farrowed	Pigs Saved	Total Pig Crop	$ Per Head	Total Million $				Federally Inspected	Other	Total	Farm	Total
1970	7,134	52,126	6,882	49,588	101,921	23.50	1,584	86.919	21,823	4,955	78,187	7,630	85,817	1,235	87,052
1971	7,303	51,918	6,297	46,006	98,512	28.50	1,780	98,644	22,832	3,991	86,667	7,771	94,438	1,210	95,648
1972	6,512	47,523	5,967	43,053	90,828	42.00	2,477	89,555	20,919	5,245	78,759	5,948	84,707	1,158	85,865
1973	6,458	46,125	5,864	41,998	88,199	60.40	3,663	82,419	20,154	7,738	72,264	4,531	76,795	1,095	77,890
1974	6,372	44,792	5,466	38,952	83,954	44.90	2,457	85,504	19,976	6,838	77,071	4,691	81,762	1,321	83,083
1975	4,973	35,530	4,952	35,656	71,186	80.40	3,959	73,627	16,835	7,756	64.926	3,761	68,687	1,193	69,880
1976	5,777	42,177	5,850	42,218	84,395	47.00	2,583	75,747	18,160	7,856	70,454	3,330	73,784	1,175	74,959
1977	6,050	42,960	6,009	43,202	86,162	63.20	3,575	80,939	19,021	7,485	74,019	3,285	77,303	1,139	78,442
1978	6,034	42,481	6,398	46,031	88,512	83.20	5,023	81,271	19,466	9,066	74,139	3,176	77,315	1,102	78,417
1979	7,179	50,571	7,306	52,120	102,691	56.00	3,775	92,327	22.595	9,416	85,425	3,674	89,099	1,080	90,179
1980[1]	7,229	52,286	6,829	49,256	101,542	74.70	4,821	100,452	23,426	8,874	91,882	4,192	96,074	1,100	97,174
1981[1]	6,440	47,600	6,258	46,176	93,776	70.10	4,115				87,850	3,697	91,547		
1982[4]	5,760	41,500													

[1] Preliminary. [2] December—May. [3] June—November. [4] Breeding intentions. *Source: Statistical Reporting Service, U.S.D.A.*

Cold Storage Holdings of Frozen Pork[1] in the U.S. on First of Month In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1969	256.3	249.3	264.3	270.2	324.0	298.7	245.7	196.2	168.3	173.9	201.5	220.6
1970	210.9	210.4	237.4	268.5	329.0	350.5	304.3	254.7	217.5	210.0	246.2	303.5
1971	336.1	351.1	338.8	387.0	463.6	494.8	477.3	402.3	330.0	306.9	310.4	325.3
1972	330.0	301.1	289.5	327.7	395.3	381.5	319.6	255.7	203.5	192.1	208.9	242.3
1973	214.2	203.1	201.6	239.6	248.4	258.8	252.2	200.8	179.2	196.0	223.6	277.2
1974	286.1	300.1	309.7	346.6	399.1	412.3	355.4	291.8	257.7	248.6	270.3	302.8
1975	306.7	294.4	299.6	299.3	345.1	323.6	284.3	229.7	185.9	189.5	221.9	269.3
1976	249.1	216.7	206.2	228.9	250.9	255.4	219.0	176.7	157.3	175.0	201.5	219.1
1977	212.1	197.0	203.4	224.7	264.6	269.9	227.9	178.9	145.5	158.5	166.0	208.5
1978	185.9	174.9	172.4	215.8	281.7	280.6	260.2	219.9	178.7	177.8	207.1	245.2
1979	241.8	224.5	220.4	245.6	278.3	290.2	269.9	225.1	180.2	178.4	219.1	257.2
1980	280.8	285.6	270.4	291.2	345.3	356.5	313.9	263.7	217.3	222.0	269.3	320.7
1981[2]	348.6	350.8	355.9	360.6	403.5	394.4	346.5	283.4	225.1	206.7	238.3	255.2
1982[2]	264.4	247.3	246.3	273.7								
1983												

[1] Excludes lard. [2] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

Hog-Corn Price Ratio[1] at Omaha

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1969	16.3	17.1	17.0	16.2	17.8	19.8	21.1	22.0	22.1	21.7	22.0	23.0	19.5
1970	22.8	23.5	21.7	19.6	18.8	18.8	19.5	16.2	14.5	13.2	11.5	10.8	16.9
1971	11.0	13.2	11.6	11.3	11.8	12.2	13.9	15.1	16.3	17.2	16.7	16.6	13.6
1972	19.7	20.6	19.0	18.2	19.7	21.5	22.8	23.5	22.6	21.8	20.6	20.5	20.6
1973	21.5	23.3	25.4	23.4	19.5	16.9	19.9	20.8	18.4	17.8	16.9	15.7	19.3
1974	14.8	13.4	12.5	12.1	10.2	10.0	11.2	10.5	10.3	10.6	11.0	11.8	11.3
1975	12.6	14.1	14.3	14.1	16.4	17.9	19.4	18.6	20.7	21.2	19.4	18.5	16.9
1976	18.6	18.6	17.7	18.3	17.7	17.6	16.8	16.2	15.1	13.7	14.4	16.3	16.8
1977	16.4	16.8	15.9	16.0	18.8	20.7	23.8	26.4	24.6	22.6	19.2	21.0	20.1
1978	22.6	24.0	22.1	20.4	20.9	20.6	21.9	24.5	25.1	25.5	23.1	23.4	22.8
1979	24.0	25.5	22.6	19.9	18.1	16.4	14.2	15.4	16.2	14.6	15.3	16.0	18.2
1980	16.5	16.1	15.2	12.3	12.0	13.8	15.3	16.1	15.6	15.2	13.8	13.5	14.6
1981[2]	13.0	13.0	12.4	12.3	12.9	15.2	15.9	18.1	19.8	18.7	17.5	16.8	15.5
1982[2]	18.0												
1983													

[1] Ratio computed by dividing average price packer and shipper purchases of barrows and gilts by average price No. 2 yellow corn both at Omaha. This ratio represents the number of bushels of corn required to buy 100 pounds of live hogs. [2] Preliminary. *Source: Economic Research Service, U.S.D.A.*

Federally Inspected Hog Slaughter in the United States In Thousands of Head

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1969	6,814	6,245	6,809	6,852	6,045	5,591	5,739	5,708	6,611	7,100	6,825	6,344	75,682
1970	6,170	5,507	6,415	6,678	5,877	5,685	5,774	6,045	7,034	7,662	7,350	7,990	78,187
1971	7,489	6,379	8,266	7,794	6,932	6,983	6,220	6,922	7,379	7,190	7,566	7,547	86,667
1972	6,400	6,280	7,800	6,733	6,793	6,313	5,276	6,512	6,420	7,048	6,988	6,197	78,759
1973	6,641	5,713	6,652	5,992	6,638	5,711	4,996	5,569	5,348	6,613	6,534	5,859	72,264
1974	6,804	5,584	6,568	6,867	7,077	5,894	5,722	6,363	6,523	7,023	6,402	6,243	77,071
1975	6,349	5,540	5,751	6,361	5,375	5,077	4,657	4,627	5,217	5,379	5,085	5,508	64,926
1976	5,400	4,873	6,325	5,827	5,086	5,146	4,905	5,968	6,361	6,929	7,110	6,525	70,454
1977	5,840	5,825	7,238	6,395	5,877	5,695	4,908	6,148	6,514	6,507	6,885	6,186	74,019
1978	5,969	5,840	6,795	6,213	6,298	5,778	5,402	6,227	6,203	6,576	6,737	6,101	74,139
1979[1]	6,393	5,693	7,113	6,962	7,284	6,678	6,734	7,662	6,840	8,736	8,097	7,234	85,425
1980[1]	8,036	7,277	7,856	8,454	8,165	7,279	6,910	6,745	7,600	8,404	7,361	7,788	91,882
1981[1]	7,768	6,873	7,988	7,993	7,004	6,682	6,539	6,580	7,320	7,872	7,308	7,923	87,850
1982[1]	6,875	6,340	7,691										
1983													

[1] Preliminary. *Source: Statistical Reporting Service, U.S.D.A.*

HOGS

Average Price Received by Farmers for Hogs in the U.S. In Cents Per Pound

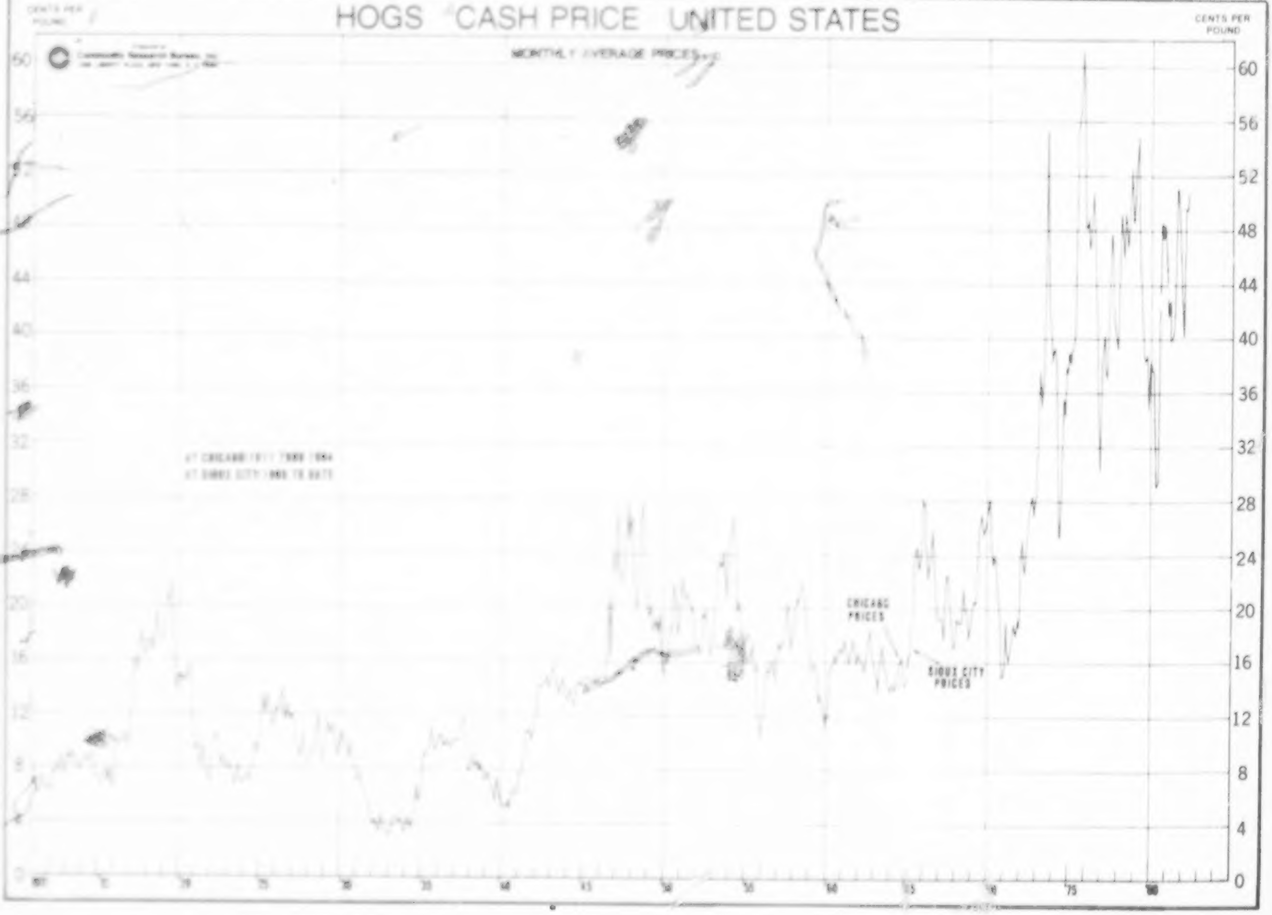
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average[1]
1974	40.10	39.30	35.00	30.60	26.30	24.20	34.30	38.00	33.70	37.10	36.80	38.40	34.30
1975	38.20	38.50	38.60	39.30	45.10	47.40	53.90	56.10	58.60	58.30	49.10	47.60	47.60
1976	47.70	48.00	45.60	47.00	47.60	49.20	47.60	42.60	39.70	32.90	31.20	36.60	43.00
1977	38.10	39.40	37.20	36.00	40.70	42.00	44.80	42.80	40.30	39.90	37.80	41.80	40.10
1978	43.90	47.40	46.40	45.00	47.90	47.60	45.40	47.40	48.00	50.80	47.30	48.00	47.10
1979	50.70	52.60	48.30	44.10	43.20	39.60	37.90	36.20	37.20	33.80	34.50	36.90	41.30
1980[2]	36.20	36.70	33.40	28.00	28.60	33.10	41.20	46.20	46.10	47.20	45.60	43.90	38.90
1981[2]	40.80	41.30	38.80	39.00	40.90	47.40	49.30	49.20	48.60	45.00	41.50	39.00	43.40
1982[2]	43.40	48.40	48.60	50.70									

[1] Weighted average by quantities sold. [2] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

Average Wholesale Price of Hogs, Average (All Weights) at Sioux City In Dollars Per 100 Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1974	40.22	38.98	34.71	30.36	25.89	27.29	36.15	37.49	35.69	38.96	38.14	39.81	34.75
1975	38.96	39.69	39.59	40.74	46.42	51.31	57.25	58.12	61.19	58.76	49.78	48.36	48.30
1976	48.23	48.92	46.76	48.06	48.96	50.91	48.31	44.03	39.39	32.69	31.96	38.28	43.19
1977	39.65	40.40	37.61	37.20	41.94	43.89	45.76	44.34	41.39	40.97	39.44	44.13	41.12
1978	46.08	49.26	47.77	46.22	49.25	48.19	46.94	48.83	50.34	52.58	48.68	49.73	48.67
1979	52.11	54.93	49.66	45.29	42.77	39.98	38.58	38.41	38.80	34.74	36.13	38.30	42.13
1980	37.58	37.61	33.97	29.08	29.35	34.97	41.79	48.49	47.42	48.36	46.44	45.07	39.48
1981	41.67	42.78	39.88	40.13	41.96	48.78	51.01	51.14	48.89	46.15	42.10	40.17	44.29
1982	45.77	49.70	49.50										

Source: Department of Agriculture



High, Low & Closing Prices of June Live Hogs Futures at Chicago In Cents per Pound

Year of Delivery		Year Prior to Delivery									Delivery Year						Life of Delivery Range
		Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	
1978	High	41.52	41.30	39.00	38.10	34.60	35.85	34.87	36.80	41.10	44.17	48.75	52.25	52.95	56.27	53.75	56.27
	Low	38.05	37.80	35.60	33.85	32.70	32.95	33.40	34.75	36.00	39.95	44.20	45.50	49.90	51.12	50.10	32.70
	Close	40.55	40.10	37.90	34.20	33.10	33.72	34.75	36.55	40.95	44.17	45.75	50.85	51.85	52.90	50.57	—
1979	High	45.75	50.00	48.67	45.77	45.80	50.80	52.10	51.92	52.00	53.20	56.40	54.92	51.25	50.37	44.30	56.40
	Low	43.30	45.60	38.60	40.80	42.55	43.77	47.65	48.30	46.25	46.87	51.25	47.10	47.15	43.90	40.70	37.90
	Close	45.70	48.85	42.70	45.57	44.47	49.60	49.70	50.65	46.90	52.35	54.10	48.00	50.25	44.15	42.57	—
1980	High	44.10	44.60	45.00	44.05	43.70	46.37	43.70	46.90	45.72	46.20	43.00	42.95	36.80	35.40	40.80	46.90
	Low	42.05	39.60	38.35	38.00	37.05	40.80	37.85	41.60	42.00	41.10	40.10	33.50	31.30	32.47	31.90	31.30
	Close	43.62	39.75	42.10	38.40	43.40	41.80	42.10	42.97	43.97	43.10	41.47	34.30	34.47	33.00	39.75	—
1981	High	45.60	45.05	47.70	51.22	52.80	57.35	59.50	61.80	63.25	53.90	55.55	49.90	51.50	52.50	54.70	63.25
	Low	42.40	43.77	42.65	46.80	49.35	50.40	53.80	56.25	52.02	50.75	48.87	43.52	48.25	46.85	49.75	42.40
	Close	44.37	44.70	46.45	50.80	50.47	56.12	57.77	61.80	52.02	52.65	48.87	49.82	49.00	52.20	54.05	—
1982	High	59.90	58.70	58.90	56.60	56.10	53.80	50.60	50.47	46.60	52.65	53.05	56.45	60.00			
	Low	56.40	55.82	55.50	53.20	51.05	48.10	47.57	44.65	38.75	45.35	48.35	49.82	55.10			
	Close	56.55	58.65	55.50	55.80	51.12	49.00	50.02	45.85	45.67	52.32	49.95	55.47	59.92			
1983	High	53.40															
	Low	50.60															
	Close	53.40															

Source: Chicago Mercantile Exchange

Month End Open Interest of Live Hogs Futures at Chicago In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	23,335	25,731	22,223	22,612	23,345	15,061	14,999	16,569	19,597	20,328	21,944	19,077
1979	26,338	27,694	25,613	24,204	27,004	30,108	24,544	25,730	26,155	24,313	26,317	24,966
1980	27,387	27,765	21,857	24,795	25,814	29,011	27,635	28,725	31,696	36,962	38,534	26,816
1981	21,267	21,588	20,767	28,147	31,149	26,639	19,557	20,944	23,471	21,945	22,294	17,924
1982	27,528	29,960	43,387	51,056								

Source: Chicago Mercantile Exchange

Volume of Trading of Live Hogs Futures at Chicago In Thousands of Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	136.8	165.6	214.0	159.0	174.7	149.9	116.9	122.4	121.8	150.5	136.1	117.4	1,765.2
1979	143.1	137.9	185.4	132.0	145.1	160.9	144.1	164.5	151.3	154.1	162.9	124.5	1,805.7
1980	152.9	122.3	138.3	158.8	133.8	170.8	189.7	188.6	239.1	258.1	195.3	201.4	2,153.8
1981	174.8	182.0	197.5	212.0	230.7	262.9	179.8	153.9	171.9	178.6	160.2	153.7	2,258.1
1982	178.7	195.6	262.6	222.6									

Source: Chicago Mercantile Exchange

Average Live Weight of All Hogs Slaughtered Under Federal Inspection In Pounds Per Head

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average[1]
1975	242	236	236	238	240	244	241	237	238	240	246	246	240.3
1976	243	236	236	236	239	240	238	236	236	238	243	239	238.3
1977	234	233	234	236	239	241	239	237	235	239	243	239	237.4
1978	236	233	234	237	241	244	241	239	239	243	248	247	240.2
1979[2]	241	237	238	240	243	246	246	240	240	242	245	246	242.0
1980[2]	243	239	239	241	244	244	242	239	239	241	246	247	242.0
1981[2]	246	242	241	242	243	245	242	239	240	242	246	247	243.0
1982[2]	243	239	239										

[1] Average is weighted by Federally inspected slaughter. [2] Preliminary. *Source: Department of Agriculture*

Honey

The 1981 world honey harvest was estimated by the USDA in early 1982 at 884,300 tonnes, 6 percent above the revised 1980 offtake. The upturn in world production in part reflected higher yields in the USSR and China, which together accounted for about a third of world output. Yields were also good in 1981 in Canada, Mexico, Argentina, and Brazil.

The Soviet Union's 1981 production in both the socialized and private sectors was estimated at 193,000 tonnes, 2 percent above the year before. The final offtake, however, depended on the level of nectar sources before the summer drought started in various parts of the European USSR, particularly in the RSFSR (the largest of the Soviet Union's fifteen republics) which normally accounts for about 60 percent of commercial honey output. The extent of disease control also influenced output. Varroasis, a disease in bees caused by the mite Varroa jacobsoni, which kept production down in 1980, caused considerable damage again in 1981 to colonies in a number of republics, especially in the North Caucasus.

Indications were that China had an excellent honey crop in 1981 producing about 115,000 tonnes, up considerably from their poor 1980 offtake. China, in recent years, has expanded its production potential by significantly increasing the number of colonies. Chinese apiculture experts estimate that the number of colonies grew from about 3.0 million in 1976 to 5.3 million in 1980.

Canada's production was estimated to have totaled 32,900 tonnes in 1981, 13 percent above 1980. Below average yields in the province of Alberta, which normally produces about a third of Canada's total production, were offset by higher than average yields in British Columbia, Ontario, and Quebec provinces. Overall good weather conditions and improved nectar sources, principally alfalfa and sweet clover, combined with the increasing number of colonies produced the larger crop.

Honey production for 1981 in Mexico was estimated at 62,000 tonnes from about 2.3 million colonies. Owing to improved weather, Southeast Mexico's honey offtake was up over 1980, accounting for about a third of total production. The High Plateau of Mexico and other regions were expected to account for the remainder. In recent years, government-sponsored credit and technical assistance to producers contributed to an increase in the number of colonies.

Production in 1981 was up significantly in South America where Argentina and Brazil produced 21 percent and 20 percent more, respectively, than in 1980. In China, output was almost 44 percent above the poor year in 1980, although only 4 percent above the 1979 level. Australian production also recovered somewhat with a 17-percent increase over 1980, though still 16 percent below 1979.

U.S. Trends

U.S. production of honey in 1981 totaled about 81.6 thousand tonnes, 10 percent below 1980 production of 90.5 thousand tonnes. The United States was the third largest world producer of honey in 1981, trailing only production in the U.S.S.R. and China. The U.S. output was produced by 4.21 million colonies, slightly more than in 1980. The average honey yield per colony was 44.1 pounds, down from 48.2 pounds in 1980, largely because of dry weather which shrank the supply of flowers and other nectar sources in many areas.

Honey consumption of about 246 million pounds was up some 3 percent from 238 million in 1980. Per capita use of honey in 1981 was unchanged from 1980 at 1.1 pounds. U.S. imports of honey totaled about 77.3 million pounds, up 58 percent from 49 million in 1980. Mexico, China, Argentina, and Canada together accounted for 87 percent of total honey imports. U.S. exports of honey in 1981, at 9.2 million pounds, were up slightly from the 1980 level.

In mid-December 1981, U.S. beekeepers reported 49 million pounds of honey on hand for sale, compared with 41 million the previous year. Mid-December stocks represented 26 percent of production, compared with 20 percent in 1980 and 16 percent in 1979.

While surplus 1981 world production resulted in an average 1981 price for all honey imported into the U.S. of 91.7 cents per kilogram vs. 94.8 cents in 1980, prices received by beekeepers for U.S. honey averaged 63 cents per pound in 1981, about 1.7 cents more than the 1980 record.

Government Support Program

The number of beekeepers making use of the U.S. Commodity Credit Corp. (CCC) loan program increased considerably in 1981. By December 31, 1981, loans had been taken out on 48.6 million pounds of 1981 honey versus 35.1 million a year earlier.

The loan and purchase rates for the 1982 U.S. honey crop averaged 60.4 cents per pound, 3 cents per pound above the 1981 level, representing 60 percent of the April 1982 adjusted parity price of $1.007 per pound.

World Production of Honey In Thousands of Metric Tons[2]

Year	Argentina	Australia	Brazil	Canada	China (Mainland)	Ethiopia	France	W. Germany	Japan	Mexico	Poland	Spain	Turkey	United States	U.S.S.R. 3	World Total 3
1969	44.1	29.1		53.3	46.0	*1968–*	18.3	26.5	14.6	79.4	15.1	22.0	28.5	267.5	226.0	1,065
1970	55.1	49.1		51.0	36.4	*72*	27.6	39.7	16.4	66.1	19.8	20.3	28.2	221.8	237.0	1,053
1971	38.8	42.2		52.0	35.5	*Avg.*	26.5	33.1	17.0	55.1	22.8	18.1	36.0	197.4	237.0	1,030
1972	49.6	44.6		50.6	36.1	*(17.5)*	22.0	26.5	13.2	84.0	22.5	19.9	36.1	214.1	240.0	1,080
1973[2]	21.0	18.1		24.8	13.6	18.1	10.5	10.0	7.6	33.0	10.4	9.5	16.8	107.8	124.7	574.0
1974	27.0	21.2		20.8	50.0	18.8	9.7	16.5	7.6	42.0	10.9	9.5	17.2	84.0	79.0	597.4
1975	23.6	20.6		21.1	60.0	19.2	9.0	8.8	6.3	38.0	7.4	10.5	17.1	89.8	76.1	609.4
1976	28.0	21.4	12.0	25.4	55.0	19.4	14.5	22.0	6.1	44.0	9.6	11.0	24.1	90.0	188.0	784.2
1977	22.0	14.9	14.0	25.4	60.0	19.0	8.2	20.0	6.2	60.0	10.0	12.0	21.7	81.0	208.0	798.3
1978	35.0	18.6	16.0	30.6	75.0	20.0	9.5	15.0	8.5	54.0	12.0	11.0	21.7	104.5	179.0	827.7
1979	30.0	25.0	18.0	32.9	110.0	20.0	14.4	9.9	7.5	52.0	13.0	12.0	23.7	107.8	189.0	880.1
1980	28.0	18.0	20.0	29.2	80.0	20.5	12.0	11.0	6.2	60.0	10.0	13.0	23.0	90.5	190.0	833.2
1981[1]	34.0	21.0	24.0	32.9	115.0	21.0	10.0	13.0	8.0	62.0	10.0	13.0	23.0	81.6	193.0	884.3
1982																

[1] Preliminary. [2] Data prior to 1973 are in MILLIONS OF POUNDS. [3] New series beginning 1976. *Source: Foreign Agricultural Service, U.S.D.A.*

Salient Statistics of Honey in the United States

Year	Number of Colonies Thous.	Yield Per Colony Lbs.	Honey Production; By States: Total U.S.	California	Florida	Iowa	Minnesota	So. Dak.	Texas	Wisconsin	Domestic Disapp.	Imports For Consumption	Domestic Exports	Stocks Jan. 1[2]	Farm Price of All Honey	Received By Farmers: Bees-Wax	All Honey
			In Millions of Pounds												¢ Lb.		
1969	4,433	60.3	267.5	46.4	25.3	11.0	21.1		11.6	14.8	272.3	14.7	9.9	62.7	17.5	61.1	15.2
1970	4,290	51.7	221.8	15.7	25.1	12.8	19.5		10.2	12.7	234.7	8.9	8.1	50.6	17.4	60.2	15.3
1971	4,110	48.0	197.4	19.9	22.2	9.0	12.2		8.4	11.6	220.9	11.4	7.6	30.9	21.8	61.3	18.0
1972	4,085	52.8	215.6	24.5	26.6	6.9	11.8		11.4	7.7	250.1	39.0	4.1	29.8	30.2	62.1	27.0
1973	4,124	58.0	239.1	31.0	33.5	7.5	15.3		9.9	11.4	224.9	10.7	17.6	30.1	44.4	74.4	43.0
1974	4,210	44.6	187.9	23.5	16.2	6.9	9.6		10.3	7.7	212.3	26.0	4.6	37.4	51.0	114.0	49.1
1975	4,206	47.4	199.2	24.5	24.5	5.9	10.9		12.9	5.5	242.8	46.4	4.0	34.4	50.5	103.0	47.8
1976	4,269	46.4	198.0	13.7	27.4	6.6	14.3		9.4	10.3	259.1	66.5	4.7	33.2	49.9	112.0	47.1
1977	4,323	41.2	178.1	13.7	14.4	6.1	12.0		9.0	9.6	241.1	63.9	5.5	34.3	52.9	158.0	49.4
1978	4,090	56.6	231.5	31.2	23.9	4.6	13.9		8.7	6.3	276.7	56.0	8.0	30.0	54.6	174.0	51.1
1979	4,163	57.3	238.7	17.1	27.3	6.6	15.8	17.3	11.4	8.8	280.4	58.6	8.8	32.2	59.3	175.0	55.3
1980	4,141	48.2	199.8	23.2	20.3	6.3	13.7	8.1	6.9	6.0	239.2	49.0	8.5	38.0	61.5	183.0	61.4
1981[1]	4,213	44.1	185.9	9.0	24.1	3.4	8.2	9.2	11.4	4.1		77.3	9.2	40.5	63.2	191.0	
1982[1]														48.6			

[1] Preliminary. [2] Prior to 1973, data are for producers' stocks for sale as of Dec. 15. *Source: Crop Reporting Board, U.S.D.A.*

Wholesale Price Index of Honey[1] (Extracted) at Chicago 1967 = 100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1969	17.1	17.8	18.1	17.4	18.2	19.6	20.6	21.2	22.0	22.5	19.6	19.6	19.5
1970	20.1	20.1	20.1	20.1	18.8	18.8	18.8	18.8	18.8	18.8	18.8	18.8	19.2
1971[2]	18.8	18.8	18.8	18.8	18.8	18.8	20.3	188.0[2]	188.0	188.0	188.0	188.0	
1972	188.0	188.0	188.0	188.0	188.0	188.0	188.0	188.0	188.0	188.0	188.0	188.0	188.0
1973	188.0	188.0	218.0	218.0	231.6	264.4	256.2	258.9	N.A.	258.9	272.5	337.9	244.8
1974	337.9	N.A.	337.9	343.3	343.3	307.9	N.A.	272.5	N.A.	272.5	343.3	343.3	322.4
1975	343.3	343.3	343.3	343.3	332.4	321.5	321.5	N.A.	248.0	N.A.	248.0	N.A.	316.1
1976	N.A.	N.A.	N.A.	223.4	231.6	224.8	N.A.	245.2	N.A.	245.2	235.4	234.3	234.3
1977	228.9	239.8	238.0	231.6	228.9	228.9	242.1	245.2	249.7	244.3	N.A.	247.3	238.6
1978	247.1	245.8	252.5	254.0	255.6	247.4	N.A.	250.5	248.7	248.4	246.4	246.5	249.4
1979	250.0	259.3	270.8	255.8	264.3	286.7	277.7	288.8	283.4	286.4	288.3	283.6	274.6
1980	286.8	289.6	287.1	272.5	284.1	283.0	277.2	283.4	284.0	285.6	285.9	288.7	284.0
1981	298.7	296.9	285.4	299.7	294.3	287.1	296.4	304.4	295.0	305.3	304.9	295.7	297.0
1982	299.7	294.3	306.6										

[1] White Clover, any state of origin, in 60 lb. cans, wholesaler to baker, confectioner, or other large user. [2] Prior to Aug. 1971, data are in cents per pound. Price for Aug. 1971 was 24.0¢ lb. *Source: Bureau of Labor Statistics* (0254-0101.01)

Interest Rates

The interest rate markets were influenced by a number of factors in 1981, including: (1) concern about the size of the fiscal 1982 U.S. budget deficit (and the budgets for 1983 and beyond); (2) Federal Reserve monetary policy; (3) the condition of the U.S. economy; and (4) the rate of inflation.

During 1981 and into 1982, the government's Office of Management and the Budget (OMB) increased its estimates of the size of the budget deficits. An early estimate projected a fiscal 1982 deficit of $42 billion, and a fiscal 1983 deficit of $23 billion. By late winter 1981, the OMB was projecting a fiscal 1982 deficit of $109 billion and a fiscal 1983 deficit of $152 billion. Other, private estimates projected 1983 deficits ranging up to around $200 billion. Large government deficits are met by sizable government borrowing in interest rate markets, which tends to exert an upward influence on interest rates and to "crowd out" the less financially secure would-be corporate borrowers.

The Federal Reserve monetary policy in 1981 and early 1982 continued to focus on money supply growth. M-1 (formerly the M-1B) showed relatively little growth between spring 1981 and fall 1981. It jumped upward in December 1981/January 1982, and then leveled off. Overall, Fed policy was steady, aiming at 3.5–6.0 percent M-1 growth in 1981. Actual M-1 growth between the fourth quarter of 1981 and 1982 was 5.0 percent—and, allowing for "NOW account" shifts from savings, adjusted M-1 1981 growth was at 2.3 percent. In early 1982, the Fed gave leeway to above target M-1 growth because of the generally weak economy.

According to government statistics, the U.S. officially entered a recession in the third quarter of 1981. By spring 1982, U.S. unemployment had increased to 9.4 percent, a post-World War II record. The recession was also marked by increases in corporate use of short term debt, and by weakness spreading outward from the key housing and auto industries. Moreover, the difficulties faced by the U.S. economy occurred against a backdrop of worldwide recessions—many influenced by high U.S. interest rates and decreased U.S. imports. Thus, the international loans of many U.S. banks to some East European nations and less developed nations were being considered as "risky."

One of the potentially most constructive developments for lowering of interest rates was the slowing down of the rate of inflation in spring 1982.

Futures Markets

In 1981, the major futures market for Treasury bonds, Treasury Notes, and for Government National Mortgage Association (GNMA) bonds was the Chicago Board of Trade. The Chicago Mercantile Exchange (IMM) was the major futures market for Treasury Bills, Domestic Bank CDs, and Eurodollars. Smaller Treasury bill and Treasury bond futures contracts are also actively traded on the MidAmerica Commodity Exchange in Chicago.

U.S. Producer (Wholesale) Commodity (All Commodities) Price Index 1967 = 100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1976	179.4	179.4	179.7	181.3	181.9	183.2	184.4	183.8	184.8	185.3	185.6	187.1	183.0
1977	188.1	190.2	192.0	194.3	195.2	194.5	194.8	194.6	195.3	196.3	197.1	198.2	194.2
1978	200.1	202.1	203.7	206.5	208.0	209.6	210.7	210.6	212.4	214.9	215.7	217.5	209.3
1979	220.8	224.1	226.7	230.0	232.0	233.5	236.9	238.3	242.0	245.6	247.2	249.7	235.6
1980	254.9	260.2	261.9	262.8	264.2	265.6	270.4	273.8	274.6	277.8	279.1	280.8	268.8
1981[1]	284.8	287.6	290.3	293.4	294.1	294.8	296.2	296.4	295.7	296.0	295.5	295.9	293.4
1982[1]	298.2												

[1] Preliminary. *Source: Bureau of Labor Statistics*

U.S. Consumer Price Index (Retail Price Index for All Items: Urban Consumers) 1967 = 100

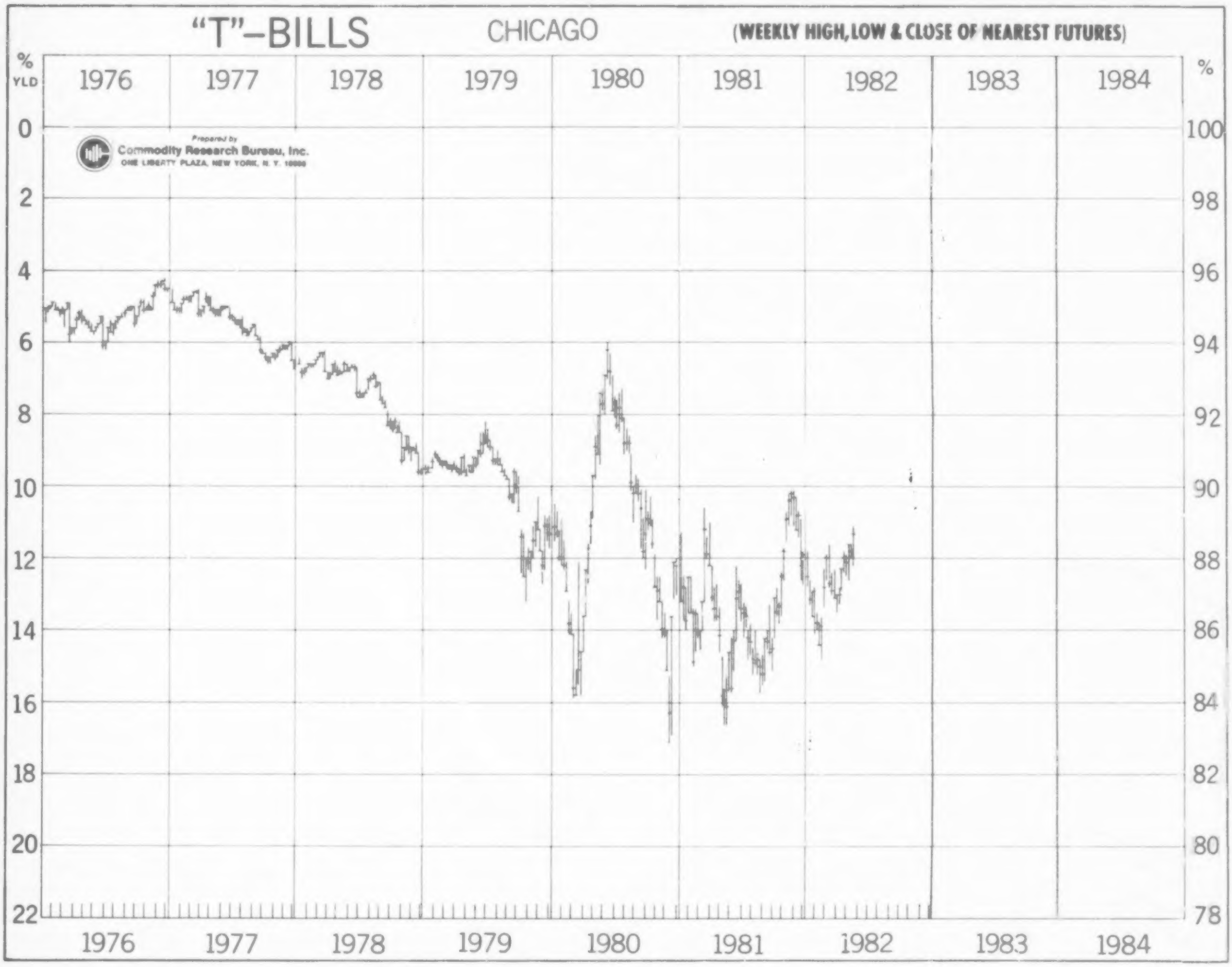
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1976	166.7	167.1	167.5	168.2	169.2	170.1	171.1	171.9	172.6	173.3	173.8	174.3	170.5
1977	175.3	177.1	178.2	179.6	180.6	181.8	182.6	183.3	184.0	184.5	185.4	186.1	181.5
1978	187.2	188.4	189.8	191.5	193.3	195.3	196.7	197.8	199.3	200.9	202.0	202.9	195.4
1979	204.7	207.1	209.1	211.5	214.1	216.6	218.9	221.1	223.4	225.4	227.5	229.9	217.4
1980	233.2	236.4	239.8	242.5	244.9	247.6	247.8	249.4	251.7	253.9	256.2	258.4	246.8
1981[1]	260.5	263.2	265.1	266.8	269.0	271.3	274.4	276.5	279.3	279.9	280.7	281.5	272.4
1982[1]	282.5												

[1] Preliminary. *Source: Bureau of Labor Statistics*

Month End Open Interest of Treasury Bond Futures in Chicago In Thousands of Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	3.3	4.4	6.1	8.8	9.7	8.8	10.3	12.6	14.7	27.6	35.7	41.2
1979	41.8	45.0	45.9	46.9	53.9	61.5	63.1	65.7	65.4	65.1	74.1	90.7
1980	71.3	66.4	57.1	70.2	84.8	111.1	110.0	117.2	123.2	153.1	204.8	243.6
1981	240.7	223.6	226.1	230.4	241.3	290.9	315.1	295.4	240.5	257.7	248.7	221.7
1982	216.2	192.9	184.4	193.0								

Source: Chicago Board of Trade



U.S. Industrial Production Index[1] (Seasonally Adjusted) 1967 = 100

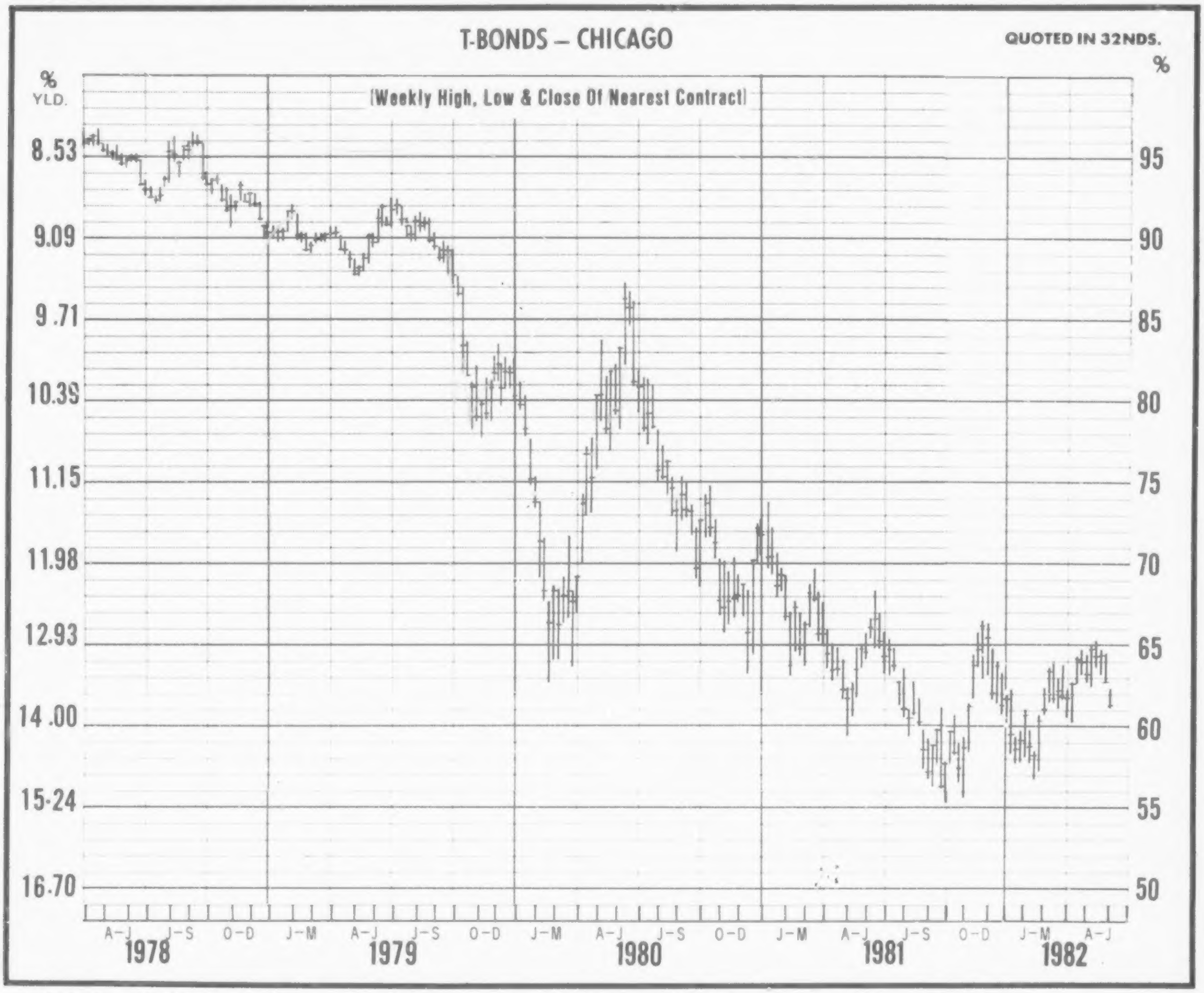
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1973	126.3	127.8	128.5	128.5	129.6	129.9	130.4	130.4	131.1	131.4	131.6	131.3	129.8
1974	129.9	129.6	130.0	129.9	131.3	131.9	131.8	131.7	131.8	129.5	124.9	119.3	129.3
1975	115.2	112.7	111.7	112.6	113.7	116.4	118.4	121.0	122.1	122.2	123.5	124.4	117.8
1976	126.1	128.1	128.7	129.0	130.1	130.7	131.2	132.0	131.3	131.3	132.6	133.6	130.5
1977	133.7	134.5	136.3	137.1	138.0	138.9	139.0	139.3	139.6	140.1	140.3	140.5	138.2
1978	140.0	140.3	142.1	144.4	144.8	146.1	147.1	148.0	148.6	149.7	150.6	151.8	146.1
1979	152.0	152.5	153.5	151.1	152.7	153.0	153.0	152.1	152.7	152.7	152.3	152.5	152.5
1980	153.0	152.8	152.1	148.2	143.8	141.4	140.3	142.2	144.4	146.6	149.2	150.4	147.0
1981[2]	151.4	151.8	152.1	151.9	152.7	152.9	153.9	153.6	151.6	149.1	146.3	143.2	151.0
1982[2]	139.6	141.8											

[1] Total Index of the Federal Reserve Index of Quantity Output. [2] Preliminary. *Source: Federal Reserve System*

Volume of Trading of Treasury Bond Futures in Chicago In Thousands of Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	11.5	10.2	14.2	19.1	23.4	33.1	37.8	62.2	60.3	87.7	95.2	98.6	555.4
1979	95.3	98.3	95.5	110.4	181.8	169.1	140.5	167.2	221.2	271.1	249.4	259.9	2,059.6
1980	311.1	332.4	349.3	423.4	520.5	608.6	502.7	516.4	501.2	691.6	722.5	1,009.8	6,489.6
1981	846.7	868.6	975.9	998.9	1,178.1	1,094.4	1,081.8	1,191.5	1,313.7	1,289.1	1,691.5	1,377.9	13,908.0
1982	1,266.4	1,306.1	1,413.9	1,259.4									

Source: Chicago Board of Trade



High, Low & Closing Prices of June Treasury Bonds Futures in Chicago In 32nds of 100%

Year of Delivery		Year Prior to Delivery									Delivery Year						Life of Delivery Range
		Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	
1978	High	FUTURES				102-15	102-21	102-06	101-12	101-01	98-30	97-04	97-19	96-25	95-24	95-07	102-21
	Low	TRADING				101-10	101-27	100-10	99-25	98-11	96-19	95-24	95-25	95-10	94-13	94-06	94-06
	Close	BEGAN AUG. 22, 1977				102-13	102-07	100-10	100-30	99-05	97-11	96-14	95-30	95-15	94-13	94-07	—
1979	High	95-07	94-10	93-16	92-28	95-06	96-03	94-09	93-31	93-15	92-08	92-09	90-27	90-19	90-09	91-01	98-11
	Low	93-29	92-20	91-26	91-03	92-15	93-08	91-00	92-02	90-09	90-01	89-13	89-09	88-02	87-20	89-16	87-20
	Close	94-03	92-20	91-28	92-20	94-21	93-08	91-11	92-30	90-18	91-23	89-21	90-05	88-06	89-22	90-30	—
1980	High	90-31	90-18	92-13	92-12	91-18	89-18	87-13	84-14	85-00	82-24	75-07	71-24	77-27	83-20	87-07	95-31
	Low	88-24	88-08	89-24	89-27	89-09	87-05	78-11	78-15	80-20	74-07	63-15	64-30	67-12	77-00	78-09	63-15
	Close	88-27	89-31	91-27	90-20	89-11	87-21	80-12	83-01	82-29	75-04	69-00	67-27	77-02	79-14	85-25	—
1981	High	79-21	84-00	85-15	81-08	77-00	75-23	75-04	71-20	73-18	74-22	70-15	70-15	67-17	64-30	67-16	88-08
	Low	71-23	76-30	77-31	74-26	71-27	69-11	67-22	66-05	65-28	69-04	64-05	64-20	61-25	59-11	64-04	59-11
	Close	77-16	79-03	80-23	75-04	73-26	71-10	68-17	70-02	72-06	70-09	65-31	67-02	61-28	64-24	65-13	—
1982	High	68-14	67-25	69-29	66-23	64-30	62-04	61-09	66-24	66-14	62-16	62-26	64-08	64-27			
	Low	64-11	62-19	65-28	62-28	59-04	56-08	56-12	58-30	60-20	58-05	57-10	60-22	61-05			
	Close	64-15	67-17	65-30	63-01	59-17	57-03	59-05	65-21	62-04	61-01	61-14	61-30	63-06			
1983	High	67-20															
	Low	63-22															
	Close	65-11															

Source: Chicago Board of Trade

High, Low & Closing Prices of June 13 Wk. Treasury Bills Futures in Chicago In Points of 100%

Year of Delivery		Year Prior to Delivery								Delivery Year						Delivery
		Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Life of Range
1978	High	93.59	93.31	93.69	93.57	93.50	93.51	93.28	93.28	93.29	93.17	93.15	93.33	93.49	93.48	93.41	93.80
	Low	92.52	92.53	93.19	93.01	92.95	93.10	92.80	92.92	92.95	92.63	92.78	93.00	93.03	93.09	93.20	92.26
	Close	92.60	93.22	93.61	93.15	93.38	93.29	92.97	93.25	93.13	92.99	93.13	93.02	93.13	93.21	93.23	—
1979	High	92.12	91.87	91.90	91.81	92.11	92.12	91.55	91.08	90.83	90.74	90.88	90.72	90.87	90.84	91.45	92.83
	Low	91.76	91.62	91.49	91.51	91.62	91.40	90.50	90.39	90.14	90.16	90.35	90.43	90.31	90.30	90.50	90.14
	Close	91.76	91.68	91.55	91.75	91.93	91.51	90.58	90.62	90.22	90.65	90.47	90.51	90.50	90.60	91.06	—
1980	High	90.91	91.55	92.59	92.50	92.30	91.65	91.41	91.22	91.01	90.50	89.05	86.40	89.94	92.73	93.97	93.97
	Low	90.51	90.48	91.34	91.54	90.93	90.36	88.10	88.85	89.21	88.37	86.06	84.20	85.40	89.75	92.00	84.20
	Close	90.62	91.46	92.32	91.89	91.11	91.03	89.29	90.55	90.17	88.84	86.49	85.82	89.90	92.30	92.12	—
1981	High	90.90	92.00	92.64	92.04	91.10	89.61	89.77	88.47	88.89	89.43	89.00	89.38	88.95	85.90	86.48	92.64
	Low	87.51	90.60	91.15	90.65	88.45	87.66	87.47	87.08	85.40	87.31	86.36	86.64	85.52	83.35	84.34	83.35
	Close	90.79	91.60	91.50	90.72	89.13	88.31	87.51	87.25	88.18	88.89	87.19	88.77	85.55	85.39	85.79	—
1982	High	89.20	87.81	88.47	87.86	87.52	87.00	87.61	89.54	89.42	87.85	87.48	88.32	88.16			
	Low	87.09	86.03	87.40	86.91	85.95	85.48	85.53	87.42	86.93	85.85	85.45	86.46	86.67			
	Close	87.10	87.73	87.92	87.21	86.08	85.60	87.55	89.19	87.76	86.90	86.92	86.83	87.88			
1983	High	87.37															
	Low	86.45															
	Close	87.29															

Source: International Monetary Market (Chicago)

Month End Open Interest of 13 Wk.[1] Treasury Bills Futures in Chicago In Thousands of Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	12.5	13.7	15.6	17.6	20.3	23.7	27.7	34.4	33.9	47.9	52.6	59.2
1979	54.2	54.2	52.7	56.4	63.7	61.2	46.8	40.9	41.4	35.4	42.8	36.5
1980	30.2	25.0	28.5	28.2	24.7	25.2	22.9	23.1	21.4	24.2	39.2	42.9
1981	45.7	38.0	32.8	28.9	35.6	38.9	45.7	43.6	32.3	38.7	36.2	30.1
1982	33.9	33.0	36.5	43.9								

[1] 90-day U.S. Treas. Bill. *Source: International Monetary Market (Chicago)*

Volume of Trading of 13 Wk.[1] Treasury Bills Futures in Chicago In Thousands of Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	37.9	24.7	33.6	41.9	38.9	48.4	39.9	74.1	87.2	98.6	137.0	106.8	772.0
1979	89.8	78.6	103.8	111.5	154.7	193.1	182.0	144.5	204.1	251.7	225.8	190.9	1,930.5
1980	237.5	245.4	290.3	350.1	321.2	250.7	224.4	204.9	231.1	274.3	287.7	401.1	3,338.8
1981	446.6	414.4	408.5	407.6	426.1	511.0	487.8	482.0	525.8	516.0	509.5	496.5	5,631.3
1982	503.5	465.5	638.7	529.1									

[1] 90-day U.S. Treas. Bill. *Source: International Monetary Market (Chicago)*

Volume of Trading of GNMA (CDR) Futures in Chicago In Thousands of Contracts

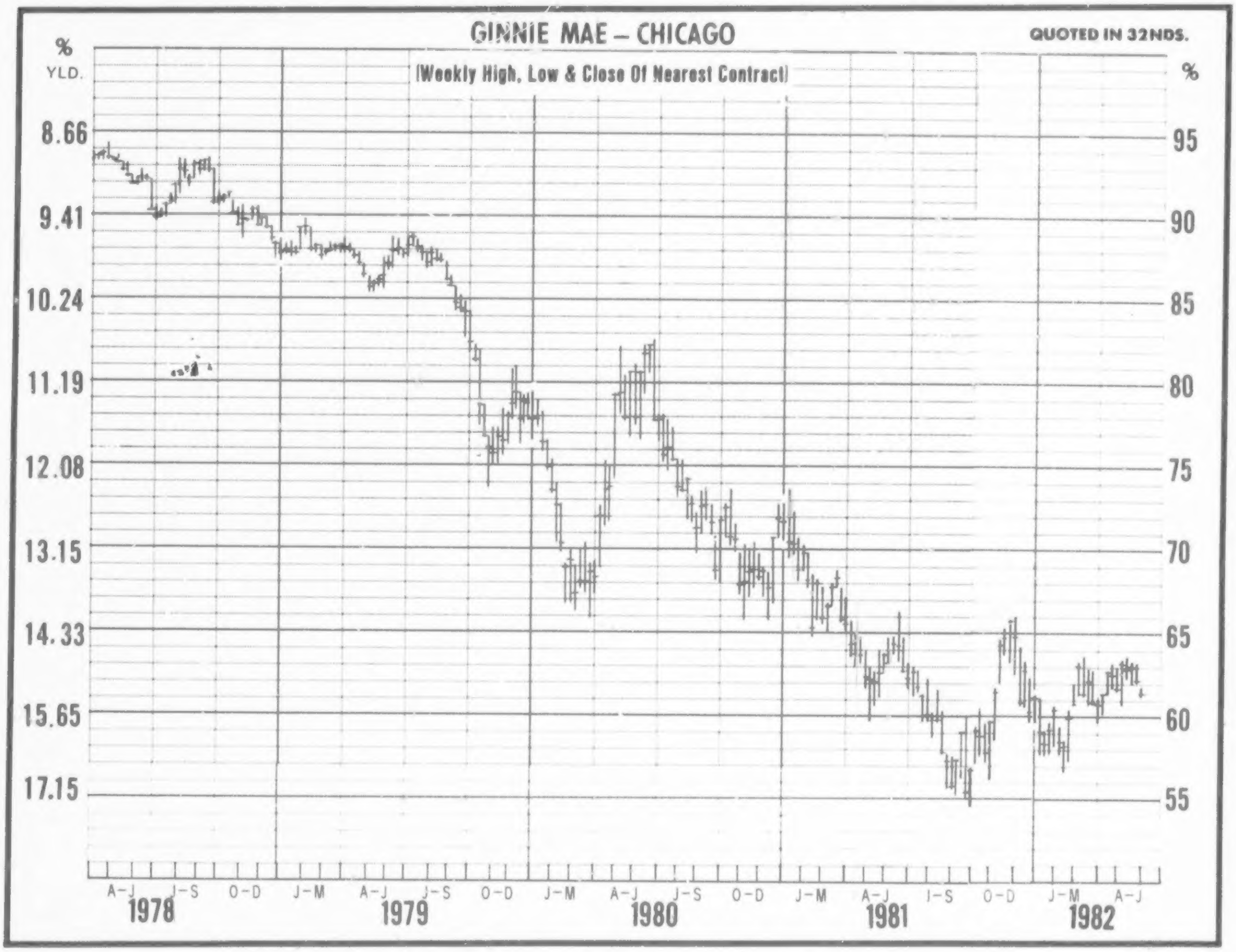
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	48.4	46.7	57.1	57.2	60.1	75.2	73.6	109.2	96.1	110.9	109.0	109.6	953.2
1979	89.8	79.8	68.1	82.0	99.8	111.8	77.0	95.3	164.5	164.9	157.9	180.4	1,371.1
1980	170.0	155.5	156.3	190.3	219.7	248.4	162.0	151.6	133.9	205.0	214.5	318.7	2,326.3
1981	179.8	159.9	186.5	202.3	228.8	188.5	162.0	156.2	189.8	194.0	242.2	202.8	2,292.9
1982	188.8	184.1	182.6	140.6									

Source: Chicago Board of Trade

Month End Open Interest of GNMA (CDR) Futures in Chicago In Thousands of Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	20.4	19.6	20.3	24.0	27.8	33.5	39.4	43.6	41.6	54.4	60.0	62.7
1979	62.4	63.5	62.9	62.8	68.5	73.3	70.6	75.0	77.0	71.0	76.3	89.0
1980	65.9	54.7	46.1	55.5	60.6	71.9	67.6	63.1	67.1	83.2	98.5	115.2
1981	97.0	97.1	99.8	105.7	107.5	121.0	13.39	116.6	96.5	95.2	82.7	77.2
1982	70.0	61.1	64.3	69.3								

Source: Chicago Board of Trade



High, Low & Closing Prices of June GNMA (CDR) Futures in Chicago In 32nds of 100%

Year of Delivery		Year Prior to Delivery									Delivery Year						Life of Delivery Range
		Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	
1978	High	95–21	95–05	96–17	96–22	97–28	97–30	97–08	96–28	96–19	95–12	94–12	94–28	94–09	93–17	92–22	97–30
	Low	94–00	94–00	94–25	95–20	95–30	96–30	95–30	95–25	95–00	93–27	93–07	93–09	93–05	91–26	91–19	91–19
	Close	94–07	94–28	96–01	96–03	97–20	97–09	96–03	96–16	95–18	94–12	93–30	93–13	93–12	91–28	91.21	—
1979	High	92–15	91–18	89–23	90–08	91–31	92–16	91–13	90–29	90–17	89–16	89–22	88–20	88–09	87–16	88–19	96–20
	Low	91–12	89–10	88–06	87–31	89–24	90–11	88–26	89–15	87–21	87–17	87–12	87–19	85–27	85–14	86–23	85–14
	Close	91–15	89–10	88–07	89–31	91–14	90–24	89–00	90–02	87–30	89–04	87–26	88–00	85–31	86–28	87–20	—
1980	High	88–12	87–09	88–21	88–26	88–03	85–28	82–00	81–16	82–13	79–11	74–11	70–10	76–08	82–05	82–12	93–20
	Low	85–30	85–19	86–20	86–30	85–28	81–27	73–18	75–00	76–16	73–04	65–22	65–18	67–15	76–16	76–18	65–18
	Close	86–02	86–23	88–06	87–16	85–29	82–10	75–31	79–27	79–18	74–00	69–06	68–15	76–00	77–31	81–18	—
1981	High	77–00	82–12	82–02	77–22	74–24	73–15	73–12	70–20	73–04	74–07	70–15	69–16	67–01	64–00	65–16	91–02
	Low	69–02	76–07	76–06	72–23	69–28	68–11	67–06	66–13	65–31	69–00	65–14	65–19	61–30	59–21	63–03	58–21
	Close	76–16	77–15	77–15	73–03	71–14	70–05	67–31	69–07	71–27	70–08	66–21	66–21	62–01	63–23	63–22	—
1982	High	67–06	66–05	67–05	63–03	62–16	60–04	60–12	65–23	65–00	61–07	61–30	63–00	63–07			
	Low	63–05	62–14	63–08	60–31	57–10	54–22	55–00	59–10	59–16	57–15	56–19	59–17	60–04			
	Close	63–05	65–31	63–08	61–05	57–14	55–15	59–17	64–15	60–29	60–02	60–18	60–20				

Source: Chicago Board of Trade

U.S. Money Supply M1-B in 1972 $ In Billions of Dollars

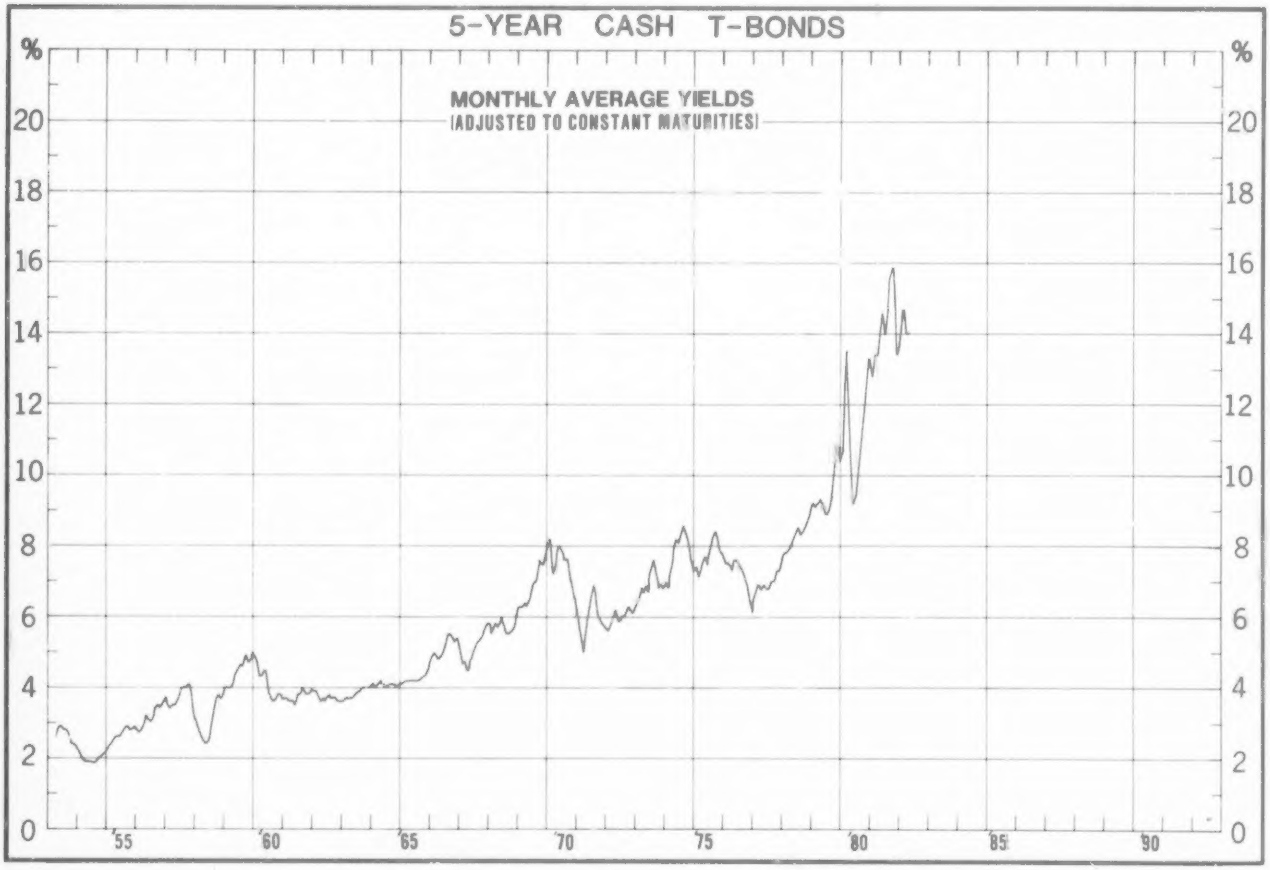
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1974	243.6	241.8	240.6	239.4	237.4	236.9	235.8	233.5	231.3	230.1	229.6	228.1	235.7
1975	226.6	225.4	226.1	224.6	225.7	227.3	225.5	225.8	225.5	223.7	224.1	222.3	225.2
1976	222.5	223.9	224.1	224.5	225.0	224.1	223.8	223.9	223.7	224.9	225.0	225.3	224.2
1977	221.2	220.9	221.0	221.5	221.2	220.9	221.2	221.2	221.8	222.6	222.8	223.1	221.6
1978	224.3	223.1	222.7	223.6	223.7	223.3	222.6	222.1	222.6	221.0	221.2	221.4	222.6
1979	222.4	220.8	220.6	221.9	219.6	219.7	219.3	218.3	216.8	215.0	213.4	211.9	218.3
1980	209.9	209.0	206.2	201.6	199.3	199.7	201.7	203.9	204.7	204.9	203.6	200.2	204.2
1981[1]	200.3	199.1	200.4	203.7	200.2	198.4	196.6	195.8	193.7	193.7	194.2	195.5	197.6
1982[1]	198.3	197.3	198.2										

[1] Preliminary. *Source: Federal Reserve System*

U.S. Money Supply M2 in 1972 $ In Billions of Dollars

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1974	771.4	767.3	766.2	763.0	757.4	754.3	752.0	744.5	738.6	735.3	734.0	729.3	751.1
1975	728.1	731.3	737.5	742.8	751.0	758.1	759.2	763.2	764.1	763.5	766.8	768.0	752.8
1976	774.0	784.7	790.1	796.8	803.7	803.6	805.1	811.2	815.6	822.6	828.5	835.4	805.9
1977	840.1	841.9	845.1	848.3	852.7	853.7	856.1	859.2	861.7	865.3	866.5	868.1	854.9
1978	686.6	867.6	867.2	867.0	865.4	863.2	862.1	863.0	863.1	862.0	862.4	861.7	864.4
1979	860.7	857.4	856.8	857.0	853.9	853.2	850.7	848.9	845.5	838.7	833.0	827.7	848.6
1980	818.6	815.6	808.9	799.3	798.2	800.1	810.1	814.6	812.0	808.8	807.7	800.0	812.3
1981[1]	798.4	796.8	803.1	810.1	808.1	806.0	802.8	804.9	798.8	800.4	805.5	808.0	803.6
1982[1]	813.9	814.8	824.7										

[1] Preliminary. *Source: Federal Reserve System*

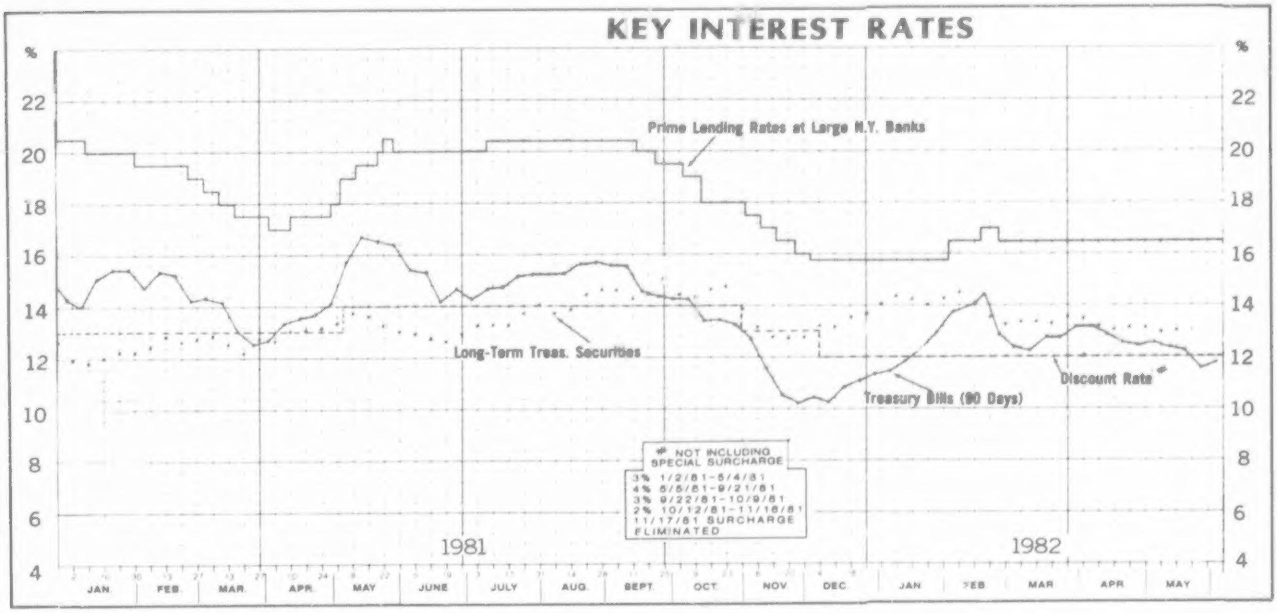


INTEREST RATES

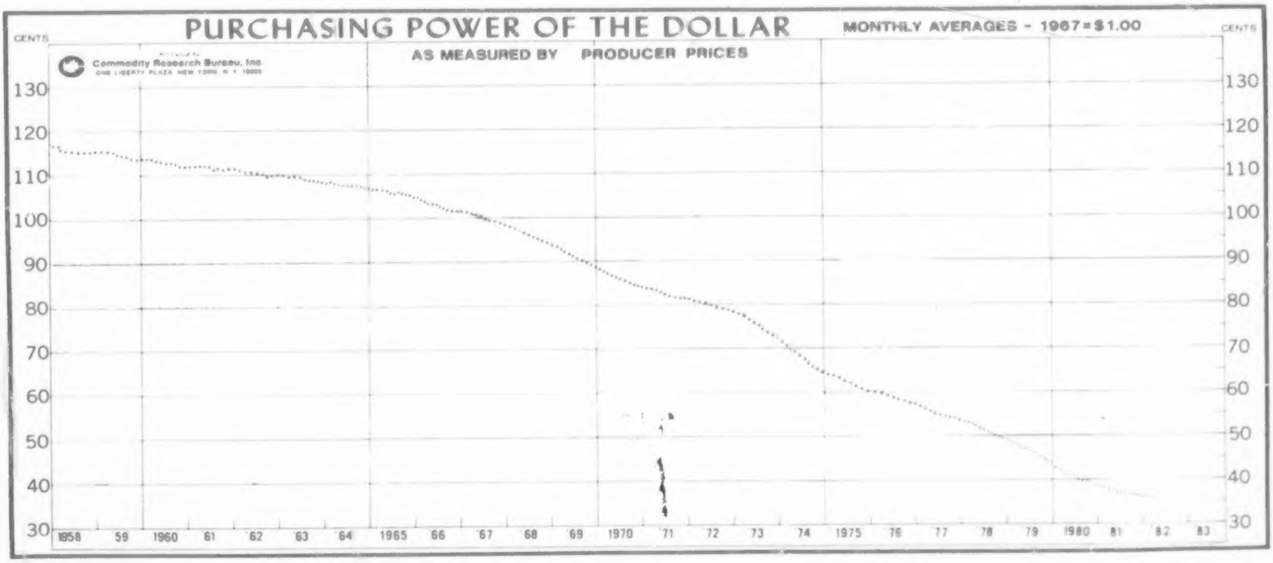
U.S. Gross National Product, National Income, and Personal Income In Billions of Current Dollars[1]

	Gross National Product					National Income					Personal Income				
Year	I	II	III	IV	Annual Total	I	II	III	IV	Annual Total	I	II	III	IV	Annual Total
1975	1,455	1,499	1,564	1,598	1,529	1,157	1,189	1,243	1,272	1,215	1,205	1,238	1,274	1,305	1,255
1976	1,672	1,699	1,729	1,773	1,718	1,346	1,364	1,389	1,418	1,379	1,349	1,374	1,404	1,438	1,391
1977	1,839	1,894	1,951	1,989	1,918	1,474	1,524	1,576	1,612	1,546	1,476	1,514	1,558	1,604	1,538
1978	2,032	2,130	2,191	2,272	2,156	1,645	1,721	1,772	1,845	1,745	1,638	1,692	1,748	1,809	1,722
1979	2,341	2,375	2,444	2,496	2,414	1,904	1,932	1,986	2,031	1,963	1,865	1,906	1,972	2,032	1,944
1980[2]	2,572	2,565	2,637	2,731	2,626	2,089	2,070	2,122	2,205	2,121	2,088	2,115	2,182	2,256	2,160
1981[2]	2,853	2,886	2,965	2,998	2,926	2,291	2,321	2,378	2,401	2,348	2,320	2,369	2,442	2,487	2,404
1982[2]	2,995														

[1] Seasonally adjusted at annual rates. [2] Preliminary. *Source: U.S. Dept. of Commerce*



* NOT INCLUDING SPECIAL SURCHARGE
3% 1/2/81-5/4/81
4% 5/5/81-9/21/81
3% 9/22/81-10/9/81
2% 10/12/81-11/16/81
11/17/81 SURCHARGE ELIMINATED



Iron and Steel

World production of pig iron in 1981 decreased 1.4 percent, to 552.0 million short tons from a revised 1980 total of 559.7 million tons, according to preliminary data of the U.S. Bureau of Mines. World production of raw steel in 1981, estimated by the U.S. Bureau of Mines at 768.0 million tons, was 1.5 percent below the revised total of 780.0 million tons in 1980.

U.S. production of pig iron and raw steel, and shipments of steel mill products and iron castings increased in 1981. Preliminary data of the U.S. Bureau of Mines indicated that pig iron production increased 7.7 percent in 1981 to about 74 million short tons, and that raw steel production increased 7.3 percent to about 120 million tons.

Steel mill product shipments in the U.S. increased about 7.2 percent to 90 million tons in 1981, and shipments of iron castings were up an estimated 8.3 percent to 13 million tons. Steel castings shipments were off about 6 percent in 1981 to 1.8 million tons. Total apparent domestic consumption of steel and cast iron increased an estimated 5 percent in 1981, according to preliminary data of the U.S. Bureau of Mines.

In 1981, the domestic steel industry experienced a strong first quarter, a weaker second quarter, a more-than-seasonal summer decline, and a slack final quarter, according to the Department of Commerce. Activity in the fourth quarter of 1981 was restrained by a weak automotive market and very high interest rates, which also inhibited investment in housing and in plant and equipment. Steel shipments to the oil and gas industry in 1981 were very strong, exceeding previous records, prompting expansion of pipe-making capacity to provide the higher quality tubular product needed to drill deeper wells in order to reach more remote deposits, especially those offshore. Depressed automotive and housing markets (including appliances) caused demand for flat-rolled sheet and strip to increase only moderately over 1980. Rod and bar markets, which depend on construction, machinery, auto, and truck output exhibited a similar pattern. Shipments of these steel products increased in 1981 because consumers stopped reducing inventories, and not because they required more steel for their operations.

Apparent steel consumption (product shipments plus imports, less exports) in the U.S. was expected to increase in 1982 on the basis of anticipated improvement in the major steel markets and as business and industry begins to take advantage of new tax incentives for machinery and equipment. Important unresolved issues are: the cost of making production facilities conform to environmental standards; increased steel imports despite the Trigger Price Mechanism (TPM); and the cost of steel labor—steel wage rates are near the top for U.S. industries, and contract renewals occur in 1983.

The Trigger Price Mechanism (TPM) to discourage dumping of foreign steel was continued by the Department of Commerce (DOC) in 1981. Also, DOC began to monitor the level of imports of specialty steels outside the TPM. The base trigger price set for the second quarter of 1981 remained essentially unchanged into the first quarter of 1982. Audits of related-party import sales were improved. Several foreign producers, were given preclearance to import certain products below trigger prices after it was determined that their prices were not unfair, but later in the year such preclearances were suspended. Surges of imports of some types of steel led to antidumping and countervailing duty investigations by DOC, and several U.S. companies announced intention to file complaints by yearend. In spite of the TPM, the trend of steel imports remains upward, and their share of the U.S. market is increasing. In late 1981, with imports rising sharply and likely to exceed the 1980 total by one-sixth, the effectiveness of the TPM was under close scrutiny by government administrators and steel company officials.

World production, trade, and consumption of iron ore declined in 1981, owing to relatively weak demand for iron and steel in domestic or export markets of most of the major industrialized countries, according to preliminary data of the U.S. Bureau of Mines. However, U.S. mine production of iron ore was 6 percent above the 1980 level; consumption was also 6 percent above the 1980 level. U.S. imports for consumption of iron ore, principally from Canada, were 13 percent higher in 1981 than in 1980 while exports declined 3 percent. A surge in demand for iron and steel in the first half of 1981 led to the increase in U.S. production, imports, and consumption. But, late in the year mine production was sharply curtailed. U.S. mine stocks of iron ore at the end of 1981 were 22 percent higher than a year earlier.

Iron and steel scrap is an important raw material in both steelmaking and foundry production. The steel industry was estimated by the U.S. Bureau of Mines to have accounted for about 80 percent of domestic scrap consumption in 1981, using scrap together with pig iron to produce steel products for the construction, transportation, oil and gas, machinery, container, appliance, and other consumer industries. The foundry industry consumed about 16 percent of the total to produce cast iron and steel products such as motor blocks, pipe, and machinery parts. Scrap iron and steel production in the U.S. in 1981 was about 4.5 percent larger than in 1980, according to preliminary data of the U.S. Bureau of Mines. Scrap consumption was up about 4.1 percent from the 1980 level.

IRON AND STEEL

World Production of Raw Steel (Ingots & Castings) In Millions of Short Tons

Year	Belgium	Brazil	Canada	Czech.	France	W. Germany	Italy	Japan	Luxembourg	China	Poland	Sweden	U.S.S.R.	United Kingdom	United States	World Total
1969	14.1		10.3	11.9	24.8	50.0	18.1	90.6	6.1	18.0		5.9	121.6	29.6	141.3	632.6
1970	13.9		12.3	12.7	26.2	49.6	19.0	102.9	6.0	20.0		6.1	127.7	31.2	131.5	655.2
1971	13.7		12.2	13.3	25.2	44.4	19.2	97.6	5.8	23.0		5.8	133.0	26.6	120.4	640.5
1972	16.0		13.1	14.0	26.5	48.2	21.8	106.8	6.0	25.0		5.8	138.4	27.9	133.2	692.7
1973	17.1		14.8	14.5	27.8	54.6	23.1	131.5	6.5	30.0	15.5	6.2	144.9	29.4	150.8	769.1
1974	17.9	8.3	15.0	15.0	29.8	58.7	26.2	129.1	7.1	30.0	16.0	6.6	150.1	24.7	145.7	780.4
1975	12.8	9.2	14.4	15.8	23.7	44.6	24.1	112.8	5.1	28.0	16.5	6.2	155.8	22.3	116.6	710.1
1976	13.4	10.1	14.7	16.2	25.6	46.8	25.8	118.4	5.0	22.6	17.2	5.7	159.6	24.6	128.0	742.4
1977	12.4	12.3	15.0	16.6	24.4	43.0	25.7	112.9	4.8	26.2	19.7	4.4	161.7	22.5	125.3	738.6
1978	13.9	13.3	16.4	16.9	25.2	45.5	26.8	112.6	5.3	35.0	21.2	4.8	166.9	22.4	137.0	782.6
1979	14.8	15.2	17.7	16.3	25.8	50.8	26.7	123.2	5.5	38.0	21.2	5.2	164.4	23.7	136.3	816.3
1980[1]	13.5	16.9	17.5	15.7	25.5	48.3	29.2	122.8	5.1	39.8	21.5	4.7	163.1	12.5	111.8	780.0
1981[2]								110.0		38.0			163.0		120.0	768.0
1982																

[1] Preliminary. [2] Estimate. *Source: Bureau of Mines*

Salient Statistics of Steel in the United States In Millions of Short Tons

Year	Value of — Exports	Value of — Imports	Production — Steel Ingots and Castings — Basic Oxygen	Open Hearth — Acid	Open Hearth — Basic	Bessemer	Electric[3]	Total Production	Alloy Steel[2] — Stainless	Alloy Steel — Other	Alloy Steel — Total Production	Shipments of Steel Products — Domestic Consumption	Shipments of Steel Products — Export
	(Million $)	(Million $)											
1969			60.2	5	60.9	5	20.1	141.3	1.6	13.3	14.9	88.1	5.8
1970	1,375	2,139	63.3	5	48.0	5	20.2	131.5	1.3	11.5	12.8	83.1	7.7
1971	945	2,803	63.9	5	35.6	5	20.9	120.4	1.3	12.2	13.5	83.5	3.5
1972	1,006	2,992	74.6	5	34.9	5	23.7	133.2	1.6	14.0	15.6	88.3	3.5
1973	1,581	3,045	83.3	5	39.8	5	27.8	150.8	1.9	16.2	18.1	106.4	5.0
1974	3,012	5,583	81.6	5	35.5	5	28.7	145.7	2.2	17.0	19.2	102.5	7.0
1975	2,970	4,507	71.8	5	22.2	5	22.7	116.6	1.1	15.2	16.3	76.0	4.0
1976	2,462	4,584	79.9	5	23.5	5	24.6	128.0	1.7	14.3	16.0	86.4	3.0
1977	2,284	5,936	77.4	5	20.0	5	27.9	125.3	1.9	15.3	17.2	88.0	3.1
1978	2,285	7,658	83.5	5	21.3	5	32.2	137.0	2.0	18.2	20.2	94.6	3.3
1979	2,804	7,823	83.3	5	19.2	5	33.9	136.3	2.1	18.0	20.1	98.3	2.0
1980[1]	3,728	7,792	67.6	5	13.1	5	31.2	111.8	1.7	15.4	17.1	97.7	2.6
1981[4]			73.2	5	13.5	5	33.2	119.9	1.7	17.5	19.2	87.0	1.8
1982													

[1] Preliminary. [2] Included under total steel production. [3] Includes crucible steels. [4] Estimate. [5] No longer published
Sources: American Iron & Steel Institute; U.S. Bureau of Mines

U.S. Production of Steel Ingots, Rate of Capability Utilization[1] In Percent[2]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1969	102.6	111.8	114.8	116.1	114.4	113.0	105.2	105.7	110.2	114.1	114.0	109.3	111.0
1970	104.1	107.6	110.0	108.9	107.1	108.3	99.8	99.6	102.6	99.0	95.7	96.6	103.4
1971	104.3	111.4	117.0	120.2	119.6	109.9	92.0	53.4	73.4	76.0	77.0	81.3	94.7
1972	92.6	98.7	107.3	110.8	110.5	105.0	95.7	100.4	104.4	107.9	109.0	109.9	104.5
1973	114.5	119.1	121.1	122.3	121.9	119.4	113.8	112.7	117.0	119.2	120.4	117.7	118.5
1974	117.8	118.8	118.1	119.0	118.0	116.5	112.5	109.6	113.3	116.8	111.1	101.4	114.4
1975[2]	90.4	93.8	93.4	84.9	75.9	69.6	65.1	67.3	74.7	69.0	67.4	66.2	76.2
1976	74.4	80.1	85.4	88.4	90.8	89.7	84.8	82.8	80.4	75.8	72.2	67.8	80.9
1977	66.8	72.1	81.2	83.3	88.6	84.9	76.7	77.2	77.2	77.7	75.0	74.7	78.4
1978	77.2	80.1	83.1	88.5	91.5	91.1	85.1	86.3	88.6	89.8	89.4	87.7	86.8
1979	83.5	87.9	94.5	93.4	94.8	93.7	89.9	86.0	82.8	84.4	80.6	78.0	87.2
1980	82.7	85.3	88.4	83.0	69.6	58.4	53.1	54.8	62.7	72.2	79.5	77.8	72.8
1981	79.9	83.7	88.6	87.7	86.2	81.5	77.6	77.3	75.9	68.7	62.8	58.6	77.7
1982	59.3	60.9											

[1] Based on tonnage capability to produce raw steel for a full order book. [2] Data prior to 1975 are based on INDEX OF PRODUCTION 1967 = 100. *Source: American Iron and Steel Institute*

United States Production of Steel Ingots In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1969	11,084	10,915	12,400	12,143	12,356	11,810	11,365	11,421	11,523	12,324	11,916	11,812	141,262
1970	11,243	10,498	11,886	11,386	11,574	11,323	10,781	10,765	10,726	10,699	10,008	10,438	131,514
1971	11,274	10,874	12,645	12,565	12,920	11,491	9,942	5,774	7,678	8,211	8,053	8,784	120,443
1972	10,001	9,980	11,588	11,588	11,936	10,980	10.341	10,842	10,913	11,657	11,398	11,878	133,241
1973	12,373	11,626	13,088	12,788	13,174	12,488	12,290	12,182	12,229	12,876	12,586	12,722	150,799
1974	12,726	11,598	12,758	12,442	12,752	12,185	12,155	11,837	11,849	12,617	11,615	10,960	145,720
1975	11,584	10,862	11,980	10,667	9,864	8,744	8,371	8,648	9,295	9,214	8,709	8,846	116,642
1976	9,835	9,907	11,294	11,439	12,136	11,605	11,400	11,128	10,463	10,295	9,494	9,215	128,000
1977	9,089	8,859	11,049	11,167	12,201	11,384	10,319	10,393	10,050	10,442	9,748	10,031	125,333
1978	10,301	9,643	11,083	11,528	12,320	11,861	11,388	11,550	11,467	12,105	11,654	11,812	137,031
1979[1]	11,105	10,562	12,576	12,196	12,789	12,230	11,821	11,309	10.541	10,891	9,997	9,996	136,341
1980[1]	10,701	10,332	11,439	10,658	9,226	7,501	6,796	7,019	7,767	9,442	10,057	10,180	111,835
1981[1]	10,590	10,028	11,744	11,243	11,423	10,451	10,160	10,120	9,618	9,003	7,962	7,672	119,912
1982[1]	7,737	7,178											

[1] Preliminary. *Source: American Iron and Steel Institute*

Shipments of Steel Products[1] by Market Classifications in the United States In Thousands of Net Tons

Year	Appliances, Utensils & Cutlery	Automotive	Containers	Construction	Contractors Prod.	Electrical Mach. & Equipment	Export	Machinery, Industrial Equip. & Tools	Oil and Gas	Rail Transportation	Steel for Converting & Processing[2]	Steel Service Center & Distributors	All Other[3]	Total Shipments
1969	2,248	18,276	7,145	9,178	4,768	2,813	5,004	5,690	2,224	3,344	3,237	17,565	12,385	93,877
1970	2,160	14,475	7,775	9,000	4,440	2,694	5,985	5,169	1,652	3,098	3,443	17,591	13,316	90,798
1971	2,148	17,483	7,212	9,541	4,946	2,593	2,433	4,903	1,760	3,004	3,593	16,184	11,238	87,038
1972	2,362	18,217	6,616	9,299	5,055	2,824	2,555	5,396	278	2,730	4,199	18,598	13,676	91,805
1973	2,747	23,217	7,811	11,405	6,459	3,348	3,138	6,351	409	3,228	4,714	22,705	15,898	111,430
1974	2,412	18,972	8,235	12,440	6,215	3,242	3,961	6,468	521	3,414	4,486	23,206	15,900	109,472
1975	1,653	15,214	4,589	8,767	3,927	2,173	1,755	5,173	601	3,152	3,255	15,622	14,076	79,957
1976	1,961	21,334	6,914	7,406	4,543	2,670	1,838	5,188	2,652	3,027	4,141	14,662	13,111	89,447
1977	2,129	21,490	6,714	7,553	4,500	2,639	1,076	5,566	3,650	3,238	3,679	15,346	13,567	91,147
1978	2,094	21,253	6,595	9,612	3,480	2,811	1,224	5,992	4,140	3,549	4,612	17,333	15,240	97,935
1979	2,141	18,624	6,770	10,058	4,021	2,821	2,010	6,027	3,738	4,127	4,728	18,263	16,934	100,262
1980	1.726	12,156	5,549	12,149	3,362	2,441	2,597	4,566	5,368	3,178	3,881	16,174	10,706	83,853
1981	1,775	13,154	5,292	8,446	3,230	2,600	1,844	4,624	6,238	2,162	3,338	17,637	16,672	87,014
1982														

[1] All grades including carbon, alloy & stainless steel. [2] Net total after deducting shipments to reporting companies for conversion or resale. [3] Includes agricultural; bolts, nuts, rivets & screws; forgings (other than automotive); shipbuilding & marine equipment; aircraft; mining, quarrying & lumbering; other domestic & commercial equipment machinery; ordnance & other direct military; & shipments of non-reporting companies. *Source: American Iron and Steel Institute*

Net Shipments of Steel Products in the United States
(All Grades, Including Carbon, Alloy & Stainless Steel) In Thousands of Net Tons

Year	Cold Finished Bars	Rails & Accessories	Wire & Wire Products	Tin Mill Products	Plates	Sheets & Strip	Hot Rolled Bars	Pipe & Tubing	Shapes & Steel Piling	Reinforcing Bars	Hot Rolled Sheets	Cold Rolled Sheets	Semi Finished	Alloy	Stainless
1969	1,923	1,514	3,256	6,555	8,238	38,111	8,659	9,232	6,244	3,659	12,471	16,427	6,373	7,861	898
1970	1,490	1,590	2,998	7,243	8,065	35,101	8,107	7,778	6,060	4,891	12,319	14,250	7,287	6,944	709
1971	1,378	1,564	2,791	6,811	7,939	35,574	8,179	7,574	5,666	4,521	11,760	14,898	4,962	7,014	718
1972	1,675	1,601	2,952	6,135	7,553	39,862	9,299	7,609	5,656	4,454	14,036	16,123	4,917	7,777	855
1973	2,161	1,689	3,245	7,316	9,678	49,370	10,763	9,133	7,081	5,135	16,886	20,377	5,749	9,372	1,134
1974	2,251	1,785	3,171	7,528	10,919	44,991	11,061	9,844	7,210	5,089	15,774	18,275	5,509	10,179	1,345
1975	1,486	1,965	2,154	5,587	8,761	30,763	8,146	8,228	5,121	3,666	11,222	12,841	3,911	8,436	757
1976	1,618	2,017	2,461	6,436	7,160	42,303	8,664	6,265	4,187	3,876	15,090	18,265	4,384		
1977	1,792	1,863	2,401	6,382	7,538	41,586	9,251	7,484	4,379	4,234	14,484	17,627	4,055	8,760	1,118
1978	2,084	1,703	2,510	6,100	8,601	43,609	8,758	8,399	5,027	4,704	15,447	17,821	5,070	10,557	1,191
1979	2,245	2,026	2,449	6,310	9,035	43,507	8,493	8,242	5,596	5,303	15,995	17,284	5,496	11,023	1,361
1980	1,585	1,797	1,768	5,709	8,080	33,853	5,961	9,097	5,207	4,683	12,116	13,313	5,342	9,368	1,127
1981[1]	1,620	1,458	1,694	4,927	7,397	36,924	6,628	10,286	4,903	4,371	13,451	14,396	5,598	10,595	1,163
1982															

[1] Preliminary. *Source: American Iron & Steel Institute*

IRON AND STEEL

U.S. Foreign Trade of Iron & Steel Products In Thousands of Short Tons

Year	U.S. Imports of Iron & Steel Pdts.: Steel Mill Pdts.	Other Steel Pdts.	Iron Pdts. & Ferro-alloys	Grand Total: Quantity	Grand Total: Mil. $	Iron & Steel Scrap	Exports of Iron & Steel Pdts. from U.S.: Steel Mill Pdts.	Other Steel Pdts.	Iron Pdts. & Ferro-alloys	Grand Total: Quantity	Grand Total: Mil. $	Iron & Steel Scrap
1975	12,012	657	1,250	13,919	5,257	305	2,953	618	575	4,146		9,608
1976	14,285	652	1,357	16,294	5,082	507	2,519	831	607	3,865		8,120
1977	19,307	985	1,366	21,658	6,839	625	1,913	765	639	3,218		6,175
1978	21,135	797	96	22,027	7,658	794	2.421	413	436	3,271	2,285	9,038
1979	17,518	787	123	18,428	7,823	760	2,818	374	208	3,400	2,804	11,054
1980[1]	15,495	753	107	16,355	7,792	582	4,101	407	221	4,729	3,728	11,168
1981[2]				20,000						3,600		
1982												

[1] Preliminary. [2] Estimate. *Source: U.S. Bureau of Mines, American Metal Market*

Average Wholesale Prices of Iron and Steel in the U.S. In Dollars Per Net Ton

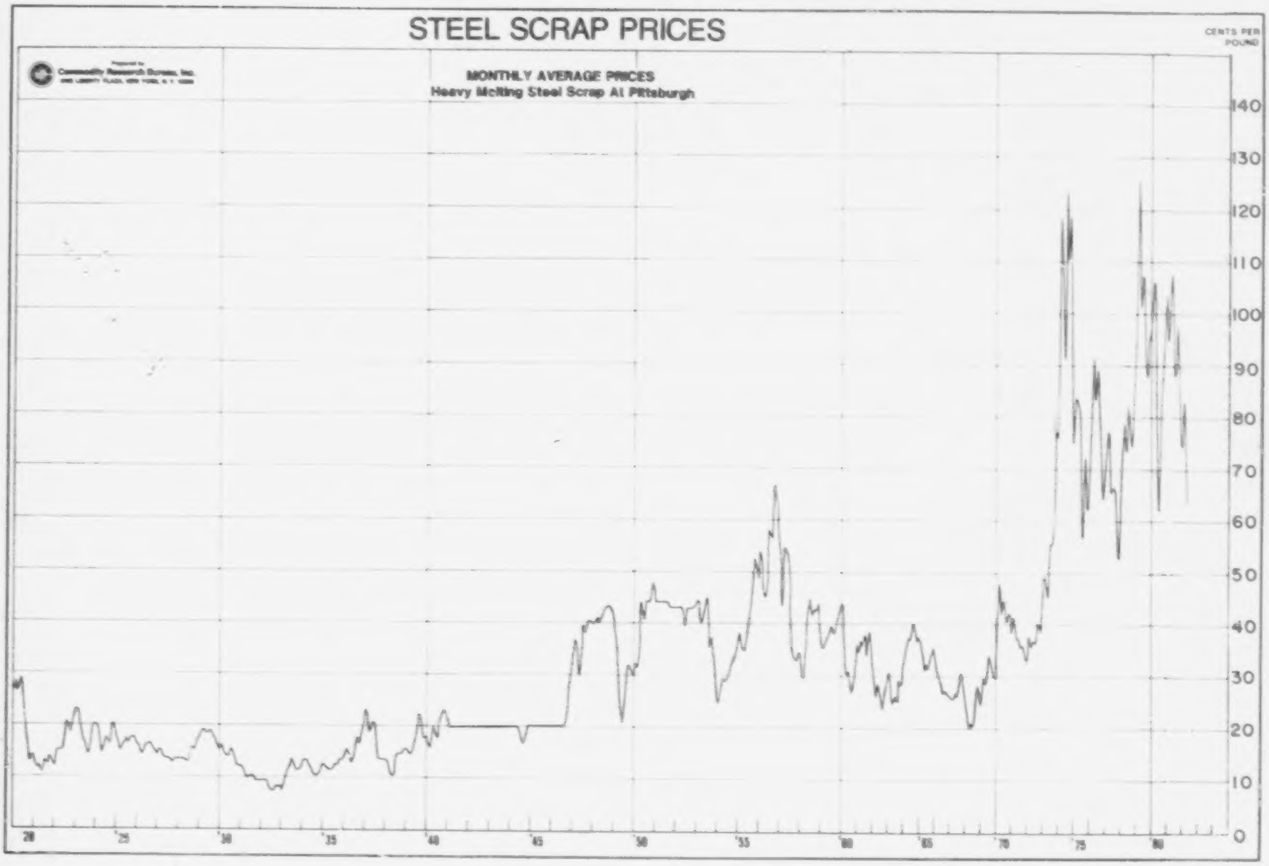
Year	Pig Iron: Bessemer[1] Neville Isl., Pa.	Pig Iron: No. 2 Foundry F.O.B. Chicago	Pig Iron: No. 2 F.O.B. Birmingham	Steel Billets Pitts.	No. 1 Heavy Melting Steel Scrap: Pitts.	No. 1 Heavy Melting Steel Scrap: Chicago	Tin Plate (¼ Lb.)	Hot Rolled Sheet[2]	Cents Per Pound at Pittsburgh: Steel Bars: Hot Rolled	Steel Bars: Cold Finished	Structural Shapes	Carbon Steel Plates	Cold Rolled Strip	Galvanized Sheets	Wire Rods-Chi. $Gr.Ton
1969	65.09	64.59	60.59	97.16	31.61	29.21	7.85	6.58	6.56	8.96	6.36	6.26	8.66	9.91	7.08
1970	70.69	70.19	66.19	103.98	42.18	41.69	9.00	7.27	7.01	9.49	6.84	6.74	9.33	10.92	7.42
1971	77.42	77.42	70.50	115.00	36.71	33.49	9.60	7.76	7.89	10.57	7.55	7.50	9.98	9.40	8.20
1972	82.22	83.23	75.50	125.00	38.42	35.94	9.60	8.36	7.13	11.50	8.10	8.15	10.94	10.53	8.80
1973	79.82	80.08	70.03	126.00	57.61	57.29	10.00	8.40	8.38	12.00	8.50	8.50	10.55	11.03	9.15
1974	124.81	126.16	141.25	166.88	104.61	112.68	11.83	9.98	11.15	13.71	9.92	11.60	12.78	12.61	10.42
1975	181.00	179.50	181.00	195.00	72.01	71.35	14.15	11.93	11.43	15.95	12.07	13.16	15.89	15.03	12.93
1976	181.00	179.50	181.00	209.48	78.83	77.49	15.83	12.12	11.32	17.38	12.96	13.41	17.97	16.20	13.31
1977	184.03	184.35	184.33	246.15	66.42	60.21	16.0–19.1	13.75	12.68	20.15	13.85	14.64	20.33	18.05	14.56
1978	190.00	198.30	191.00	282.88	78.48	73.98	18.0–20.4	15.36	14.01	22.80	15.73	16.53	22.49	20.21	16.80
1979	190.00	204.50	191.00	302.00	100.77	96.69	19.1–23.4	17.05	16.20	25.07	17.36	18.46	24.13	22.40	17.22
1980[1]	200.83	N.A.	191.00	348.70	95.48	86.70	23.3–24.9	18.21	19.59	28.95	18.98	20.57	27.15	23.56[3]	19.09
1981[1]					100.57	91.76									
1982															

[1] Preliminary. [2] Prior to 1974 prices are F.O.B. Mahoning Valley. [3] 10 gauge. *Source: American Metal Market*

World Production of Pig Iron (Excludes Ferro-Alloys) In Millions of Short Tons

Year	Australia	Belgium	Canada	Czech	France	W. Germany	India	Italy	Japan	Luxembourg	Poland	China	U.S.S.R.	United Kingdom	United States	World Total
1969	6.7	12.5	7.5	7.7	19.6	37.0	8.1		64.1	5.4		22.0	88.7	18.4	95.0	453.1
1970	6.8	12.0	9.1	8.3	20.7	36.6	7.8		75.0	5.3		24.3	83.5	19.3	91.3	474.8
1971	6.8	11.5	8.6	8.8	19.7	32.7	7.4		80.2	5.1		30.0	97.3	16.8	81.4	474.0
1972	7.2	13.0	9.4	9.2	20.4	34.9	7.9		81.6	5.1		29.0	101.8	16.7	88.9	500.1
1973	8.4	14.0	10.5	9.4	21.8	40.2	8.3	11.1	99.2	5.6	8.4	31.0	104.7	18.4	101.3	552.4
1974	8.0	14.4	10.4	9.8	24.2	43.9	8.1	12.9	99.7	6.0	8.4	33.0	109.0	15.6	95.5	564.2
1975	8.2	10.0	10.1	10.2	19.3	32.9	9.1	12.5	95.8	4.3	8.4	35.0	112.4	13.3	79.7	528.3
1976	8.2	10.9	10.8	10.4	20.6	34.9	10.7	12.8	95.4	4.1	9.0	31.7	115.1	15.1	86.8	548.6
1977	7.4	9.8	10.6	10.7	19.7	31.7	10.8	12.6	94.7	3.9	10.5	30.9	117.3	13.4	81.5	539.9
1978	8.1	10.3	11.4	11.0	20.0	33.0	10.4	12.5	86.6	4.1	12.2	38.3	121.0	12.6	87.7	557.7
1979	8.6	11.9	12.0	10.5	20.9	38.5	9.6	12.5	92.4	4.2	12.1	40.5	120.1	14.2	87.0	583.4
1980[1]	7.7	10.9	12.0	10.8	20.5	37.3	9.2	12.7	96.8	3.9	11.0	40.9	119.6	7.1	68.7	559.7
1981[2]									88.0			37.0	120.0		74.0	552.0
1982																

[1] Preliminary. [2] Estimated. *Source: Bureau of Mines*



Wholesale Price of No. 1 Heavy Melting Steel Scrap at Chicago In Dollars Per Gross Ton

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.	Average
1969	25.64	28.39	25.83	24.74	29.50	29.45	28.60	30.95	33.60	30.89	29.62	33.25	29.21
1970	40.50	48.89	45.74	39.68	42.85	43.95	40.84	40.76	45.96	41.19	34.36	35.50	41.69
1971	42.85	43.76	36.89	33.60	34.35	30.89	28.00	28.48	32.45	32.29	29.50	28.76	33.49
1972	31.50	33.58	35.89	34.50	34.50	34.55	35.50	37.50	37.50	37.50	37.50	41.23	35.94
1973	45.00	48.66	45.55	44.17	48.41	51.00	51.00	51.41	56.45	70.36	86.55	88.90	57.28
1974	87.18	114.58	125.64	132.34	100.75	115.25	137.72	119.68	113.90	114.00	107.43	83.67	112.68
1975	79.91	82.61	81.14	83.77	76.14	64.95	54.00	68.41	77.33	64.39	60.08	63.46	71.36
1976	71.67	74.90	85.04	94.96	86.45	86.86	90.67	80.95	68.90	62.00	62.00	65.14	77.46
1977	69.00	69.00	69.65	70.79	64.62	58.36	57.00	57.00	55.00	49.00	43.95	59.26	60.21
1978	71.00	71.00	71.48	76.00	70.32	72.73	76.63	74.48	69.00	69.45	79.35	86.35	73.98
1979	93.00	103.00	121.73	110.10	91.91	106.62	98.62	89.96	86.00	86.22	91.00	91.28	96.69
1980	96.14	99.00	97.00	90.54	69.62	62.24	67.45	77.95	87.24	92.22	97.29	103.68	86.70
1981	95.00	91.11	105.14	107.55	97.50	88.00	88.45	97.76	92.52	82.64	75.00	74.41	91.76
1982	83.00	78.63	69.78	63.86									
1983													

Source: American Metal Market

Consumption of Pig Iron in the U.S., by Type of Furnace or Equipment In Thousands of Net Tons

Year	Open Hearth	Bessemer	Electric	Cupola	Air	Basic Oxygen Concentrates	Other Furnaces	Direct Castings	Total
1972	22,375	[3]	961	2,264	139	60,233	254	[3]	86,226
1973	25,477	[3]	1,379	2,276	57	68,027	402	[3]	97,618
1974	22,507	[3]	1,220	2,123	[3]	66,614	632	3,697	96,792
1975	14,554	[3]	1,019	1,362	[3]	59,210	483	3,010	79,638
1976	15,410	[3]	638	1,197	[3]	66,138	406	3,255	87,045
1977	12,531	[3]	993	1,241	[3]	63,877	354	3,007	82,003
1978	13,444	[3]	1,440	1,056	[3]	69,028	398	3,055	88,420
1979	12,865	[3]	905	1,026	[3]	68,526	397	3,738	87,458
1980[1]	8,606		855	698		56,414	299	2,182	69,053

[1] Preliminary. [2] Estimate. [3] Included in "Other Furnaces." *Source: Bureau of Mines*

U.S. Pig Iron Production (Excluding Production of Ferro-Alloys) In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1972	6,617	6,598	7,708	7,726	8,012	7,427	7,321	7,385	7,116	7,606	7,475	7,960	88,942
1973	8,199	7,756	8,627	8,490	8,809	8,468	8,516	8,282	8,087	8,588	8,402	8,609	100,837
1974	8,563	7,804	8,386	8,233	8,387	8,185	8,337	7,872	7,713	8,187	7,250	6,731	95,670
1975	7,371	7,135	8,071	7,432	6,990	6,239	5,968	6,031	6,245	6,292	5,981	6,234	79,923
1976	6,636	6,754	7,519	7,601	8,116	7,874	7,999	7,751	6,995	6,969	6,382	6,272	86,870
1977	5,985	5,827	7,174	7,382	7,962	7,530	7,008	6,763	6,566	6,636	6,121	6,419	81,328
1978	6,390	5,971	6,894	7,189	7,936	7,754	7,637	7,518	7,391	7,809	7,533	7,658	87,679
1979	7,064	6,636	7,953	7,726	8,277	8,026	7,505	7,351	6,762	6,779	6,258	6,372	86,975
1980	6,583	6,357	7,115	6,677	5,906	4,664	4,222	4,360	4,596	5,621	6,132	6,489	68,721
1981	6,603	6,108	7,193	6,755	6,938	6,408	6,268	6,259	5,889	5,419	4,782	4,750	73,456
1982	4,489	4,169											

Source: American Iron and Steel Institute

Salient Statistics of Ferrous Scrap & Pig Iron in the U.S. In Millions of Short Tons

	Consumption: Ferrous Scrap & Pig Iron Charged To														
	Mfg. of Pig Iron & Steel Ingots & Castings			Iron Foundries & Misc. Users				All Uses					Stocks—Dec. 31 Ferrous Scrap & Pig Iron at Consumers'		
Year	Scrap	Pig Iron	Total	Scrap	Pig Iron	Total	Mfg. of Steel Castings (Scrap)	Ferr. Scrap	Pig Iron	Grand Total	Imports of Scrap[2]	Exports of Scrap[3]	Scrap	Pig Iron	Total Stocks
1972	73.4	84.0	157.2	17.3	2.1	19.4	2.7	93.4	89.1	182.5	.3	7.2	8.2	1.7	9.8
1973								103.6	99.8	203.4	.3	10.9	7.1	1.2	8.3
1974	81.1	92.8	173.9	21.1	3.9	25.0	3.3	105.5	96.8	202.3	.2	8.5	8.4	.8	9.2
1975	62.8	76.8	139.6	16.3	2.7	10.0	3.2	82.3	79.6	161.9	.3	9.4	8.8	1.4	10.2
1976	68.4	84.2	152.6	18.6	2.8	21.4	2.9	89.9	87.0	176.9	.5	7.9	10.0	1.5	11.5
1977	69.3	79.4	148.3	20.0	2.6	22.6	2.9	92.2	82.0	174.2	.6	5.9	9.2	1.3	10.5
1978	76.3	85.7	162.0	19.9	2.7	22.6	3.0	99.2	88.4	187.6	.8	9.0	8.3	.9	9.2
1979	77.2	84.7	161.9	18.5	2.7	21.2	3.2	98.9	87.5	186.4	.8	11.1	8.7	.9	9.6
1980[1]	66.6	67.1	133.7	14.3	1.9	16.2	2.9	83.7	69.1	152.8	.6	11.2	8.0	.9	8.9
1981[4]	70.6	73.0	143.6	14.2	2.0	16.2	2.6	87.3	75.1	162.4	.5	6.4	8.2	.8	9.0

[1] Preliminary. [2] Including tinplate scrap. [3] Excluding tinplate circles, strips, cobbles, etc. [4] Estimate. *Source: Bureau of Mines*

Basic Pig Iron Prices at Valley Furnaces (F.O.B. Producing Point) In Dollars Per Short[1] Ton

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1973	71.99	71.99	75.89	75.89	75.89	75.89	75.89	75.89	75.89	75.89	75.89	75.89	75.24
1974	75.89	77.44	82.81	96.00	96.00	133.80	133.80	149.88	149.88	150.63	155.75	169.40	122.61
1975	179.88	179.88	179.88	182.38	182.38	182.38	182.38	182.38	182.38	182.38	182.38	182.38	181.76
1976	182.38	182.38	182.38	182.38	182.38	182.25	—	—	—	—	182.25	182.25	182.33
1977	182.25	—	178.00	178.00	178.00	178.00	178.00	178.00	191.00	191.00	191.00	191.00	183.11
1978	191.00	191.00	191.00	191.00	191.00	191.00	191.00	203.00	203.00	203.00	203.00	203.00	196.00
1979	203.00	203.00	203.00	203.00	203.00	203.00	203.00	202.50	202.50	202.50	202.50	202.50	203.00
1980	203.00	203.00	203.00	203.00	203.00	203.00	203.00	203.00	203.00	203.00	203.00	203.00	203.00
1981	203.00	203.00	203.00	203.00	203.00	203.00	203.00	203.00	213.00	213.00	213.00	213.0	206.00
1982	213.00												

[1] Prior to May '73, prices are for long ton. *Sources: American Metal Market; Bureau of Labor Statistics*

World Production of Iron Ore[3], by Specified Countries (Gross Weight) In Millions of Long Tons

Year	Australia	South Africa	Brazil	Canada	Chile	China	France	W. Germany	India	Liberia	Spain	Sweden	United Kingdom	United States	U.S.S.R.[1]	Venezuela	World Total[1]
1972	62.8		41.4	39.7	8.5	59.0	53.4	4.7	34.9	22.2	6.6	32.6	8.9	75.4	204.8	18.2	766.2
1973	83.5		49.7	49.4	9.3	55.0	53.4	5.0	35.0	23.2	6.5	34.2	7.0	87.7	212.7	22.7	832.3
1974	95.4		74.3	49.2	10.1	60.0	53.4	4.4	34.9	23.4	8.1	35.6	3.5	84.4	221.3	26.0	883.8
1975	96.1		88.5	46.1	10.8	64.0	48.9	3.2	40.8	24.0	7.5	30.4	4.4	78.9	229.1	24.4	888.2
1976	91.8	15.4	92.6	54.7	9.9	59.1	44.5	2.2	43.2	20.2	8.1	29.4	4.5	80.0	237.3	18.4	885.1
1977	94.4	26.1	80.7	56.7	7.8	49.2	36.1	2.5	41.9	17.4	8.2	24.4	3.7	55.8	238.0	13.5	828.3
1978	81.8	23.8	83.6	41.1	6.9	68.9	32.9	1.6	38.2	17.7	8.4	21.1	4.2	81.6	242.4	13.3	835.4
1979	90.3	29.1	102.4	58.9	7.4	73.8	31.1	1.6	38.9	18.1	8.7	26.2	4.2	85.7	237.9	16.1	897.1
1980[2]	94.0	25.9	104.3	48.0	8.5	73.8	28.5	1.9	40.0	17.1	8.9	26.8	.9	69.6	241.1	15.8	873.6
1981[1]	90.0	26.0	98.0	47.0		70.0	23.0		41.0	17.0		25.0		74.0	241.0	14.0	853.0

[1] Estimate. [2] Preliminary. [3] Iron ore, iron ore concentrates and iron ore agglomerates. *Source: Bureau of Mines*

Salient Statistics of Iron Ore[2] in the U.S. In Millions of Long Tons

Year	Net Import Reliance as a % of Apparent Consumption	Production[3]					Shipments[4]	Value Mill. $ (at Mine)	Avg. Value $ at Mine Per Ton	Stocks—Dec. 31			Imports	Exports	Consumption	Manganiferous Shipments[5]
		Total[3]	Lake Superior	Northeast	Southeast	West				Mines	Consuming Plants	Lake Erie Docks				
1973		87.7	72.4	2.6	.3	12.0	90.7	1,163.7	12.84	10.9	46.0	3.1	43.3	2.7	146.9	.2
1974		84.4	70.7	2.4	.3	10.5	85.0	1,388.4	16.34	9.4	45.2	3.3	48.0	2.3	138.2	.2
1975	30	78.9	66.7	1.9	.1	9.6	75.7	1,620.6	21.41	12.3	52.2	4.6	46.7	2.5	114.1	.1
1976	31	80.0	67.4	2.0	.1	9.7	77.1	1,871.1	24.28	14.0	56.2	4.8	44.4	2.9	125.4	.2
1977	48	55.8	44.1	1.2	.1	9.3	54.1	1,422.7	26.32	14.8	42.3	3.0	37.9	2.1	116.0	.2
1978	29	81.6	72.7		8.9		83.2	2,401.4	28.86	12.4	39.3	3.6	33.6	4.2	124.8	.3
1979	25	85.7	77.2		8.6		86.2	2,814.4	32.64	11.3	39.0	5.4	33.8	5.1	125.4	.2
1980[1]	25	69.6	62.3		7.3		69.6	2,544	36.56	10.6	35.7	6.1	25.1	5.7	98.9	.2
1981[6]	28	74.3					71.6			17.5	36.2	6.6	28.3	5.5	115.0	

[1] Preliminary. [2] Usable; less than 5% Mn. [3] Includes by-product ore. [4] Excludes by-product ore. [5] Iron ore; 5 to 35% Mn. [6] Estimate. *Source: Bureau of Mines*

U.S. Imports (for Consumption) of Iron Ore from Principal Countries In Thous. of Long Tons (2240 Pounds)

Year	India	Venezuela	Australia	Brazil	Canada	Chile	South Africa	U.S.S.R.	Liberia	Sweden	Peru	Norway	Total
1973	—	13,148	464	3,183	21,628	205	—	—	2,734	273	1,501	—	43,296
1974	—	15,378	638	6,572	19,702	296	1	126	2,730	335	1,810	—	48,029
1975	164	13,137	803	7,526	19,111	931	128	265	2,496	182	1,551	53	46,743
1976	130	9,001	617	5,388	24,962	608	162	44	2,153	441	716	151	44,390
1977	—	6,179	305	2,243	25,283	566	249	86	1,792	153	1,020	—	37,905
1978	—	6,083	264	3,979	19,236	390	94	—	2,170	256	818	302	33,616
1979	54	4,563	183	3,095	22,602	245	106	—	2,190	171	456	44	33,776
1980[1]	—	3,602	—	1,995	17,311	322	6	—	1,590	33	193	—	25,058
1981[2]		5,071		1,738	18,845	342			2,160	87	78		28,328

[1] Preliminary. [2] Estimate. *Source: Department of Commerce*

Total[1] Iron Ore Stocks at End of Month in the U.S. In Millions of Long Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1972	75.8	72.7	68.7	64.9	65.1	66.3	66.7	67.7	69.7	70.2	69.1	67.0
1973	63.2	59.6	55.3	52.4	53.5	55.3	57.0	58.5	60.3	61.6	60.7	59.5
1974	54.9	50.9	47.2	44.2	46.4	47.5	50.0	51.5	53.6	55.7	56.6	57.7
1975	56.6	54.9	52.9	52.3	56.7	57.6	61.2	63.9	66.1	66.6	67.3	68.1
1976	66.9	65.4	63.1	61.4	62.6	64.1	65.3	66.6	69.3	71.4	73.2	75.0
1977	73.5	72.2	70.1	68.5	67.7	68.5	69.7	67.2	65.9	63.5	60.7	59.4
1978	56.3	54.1	53.1	50.4	49.9	51.9	51.6	53.8	54.7	55.5	56.4	55.3
1979[2]	53.0	50.7	47.8	46.7	46.6	48.0	51.0	51.5	52.0	54.2	55.2	55.8
1980[2]	53.7	51.8	49.0	49.6	50.7	53.5	56.8	57.5	58.0	57.7	56.6	56.1
1981[2]	54.5	53.2	50.8	49.8	51.4	53.7	56.4	58.8	59.6	60.4	60.1	60.2
1982[2]	60.4											

[1] All stocks at mines, furnace yards and at U.S. docks. [2] Preliminary. *Source: American Iron Ore Association*

Lard

Lard production in the United States in the 1981/82 season (ending September 30, 1982) was estimated by the USDA at 1.07 billion pounds, approximately 7 percent below the preceding season's output. The decrease in 1980/81 commercial production occurred mainly because of lower hog slaughter. Yield of lard per hog was expected to continue around the 1979/80 and 1980/81 level of 12.5 pounds.

Domestic disappearance of lard was expected to decline to 975 million pounds in 1981/82, down about 25 percent from 1.02 billion pounds last marketing year. Direct use of lard was expected to decrease compared with the preceding season, thus making more lard available for possible export. In 1980/81, Mexico provided the largest market for U.S. exports, followed by Poland and then Canada. Expected declines in 1981/82 Polish lard imports from the U.S. should adversely affect U.S. lard prices.

Early in 1982, the Foreign Agricultural Service (FAS) of the USDA projected 1981/82 world lard production of 3.80 million tonnes, down from 3.83 million estimated for 1980/81. The FAS also projected 1981/82 world production of fats and oils at 58.59 million tonnes versus 56.67 million estimated for 1980/81.

Supply and Distribution of Lard in the United States In Millions of Pounds

	Supply							Distribution							
	Production									Domestic Disappearance					
	Commercial												Direct Use as Lard		
Year	Federally Inspected	Other	Total	Farm	Total Production	Stocks Jan. 1[2]	Total Supply	Exports[3]	Shipments to U.S Territories	Total	Shortening	Margarine	Civilian	Military	Civilian Per Capita Lbs.
1971	1,830	106	1,936	24	1,960	82	2,042	282	62	1,598	520	159	880	1	4.3
1972	1,464	76	1,541	18	1,550	100	1,658	164	25	1,418	432	128	787	1	3.8
1973	1,181	55	1,235	18	1,254	61	1,305	113	8	1,140	341	72	705	1	3.4
1974	1,286	58	1,344	22	1,366	44	1,410	161	21	1,192	317	160	681	1	3.2
1975	956	39	995	17	1,012	36	1,048	88	56	876	165	45	615	1	3.0
1976	1,010	33	1,043	17	1,060	28	1,088	181	54	819	156	37	568	1	2.7
1977	1,022	[5]	1,022	16	1,038	34	1,072	182	47	805	185	73	495	1	2.3
1978	991	[5]	991	15	1,006	29	1,035	120	42	835	220	68	478	1	2.2
1979[1]	1,141	[5]	1,141	15	1,156	44	1,200	96	42	1,012	316	76	546	1	2.5
1980[4]	1,202	[5]	1,202	—	1,202	50	1,252	92	38	1,073	378		540	1	2.5
1981[4]						49									

[1] Preliminary. [2] Factory & warehouse. [3] Includes military shipments for civilian relief abroad. Also non-food products; the bulk goes into shortening. [4] Estimate. [5] Included in FARM. *Source: Economic Research Service, U.S.D.A.*

Domestic Disappearance of Lard in the United States In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1971	152.1	102.6	157.5	132.3	104.3	130.9	135.9	141.5	140.7	117.6	123.3	135.2	1,574
1972	134.0	100.4	138.3	113.3	119.8	125.2	113.2	132.2	106.7	116.0	90.7	110.8	1,400
1973	96.4	98.3	100.9	89.4	111.7	101.8	88.5	80.4	83.7	90.3	94.3	86.2	1,122
1974	89.9	84.5	87.4	100.7	107.6	89.4	81.8	115.0	97.8	124.1	102.9	89.2	1,170
1975	98.9	61.3	90.4	81.0	78.6	59.1	65.5	65.7	55.3	68.5	69.1	65.5	859
1976	67.6	47.4	86.2	53.0	67.7	53.6	67.8	74.6	65.0	79.3	76.1	64.8	803
1977	50.5	55.0	73.3	48.3	77.0	66.9	64.3	80.8	73.0	60.1	82.7	66.4	798
1978[1]	68.3	62.3	65.6	71.9	74.8	60.3	67.7	72.2	68.3	77.5	75.2	64.4	825
1979[1]	70.1	62.1	76.0	78.8	84.3	88.3	78.9	97.6	88.6	103.2	94.7	86.0	1,009
1980[1]	90.4	82.0	39.1	43.0	48.2	42.8	41.8	42.0	40.5	45.0	47.0	46.9	609
1981[1]	45.5	39.1	36.8	38.4	34.2	36.7	33.2	34.6	38.8	31.5			

[1] Preliminary. *Source: Economic Research Service, U.S.D.A.*

Average Wholesale Price of Lard—Loose, Tank Cars, Chicago In Cents Per Pound

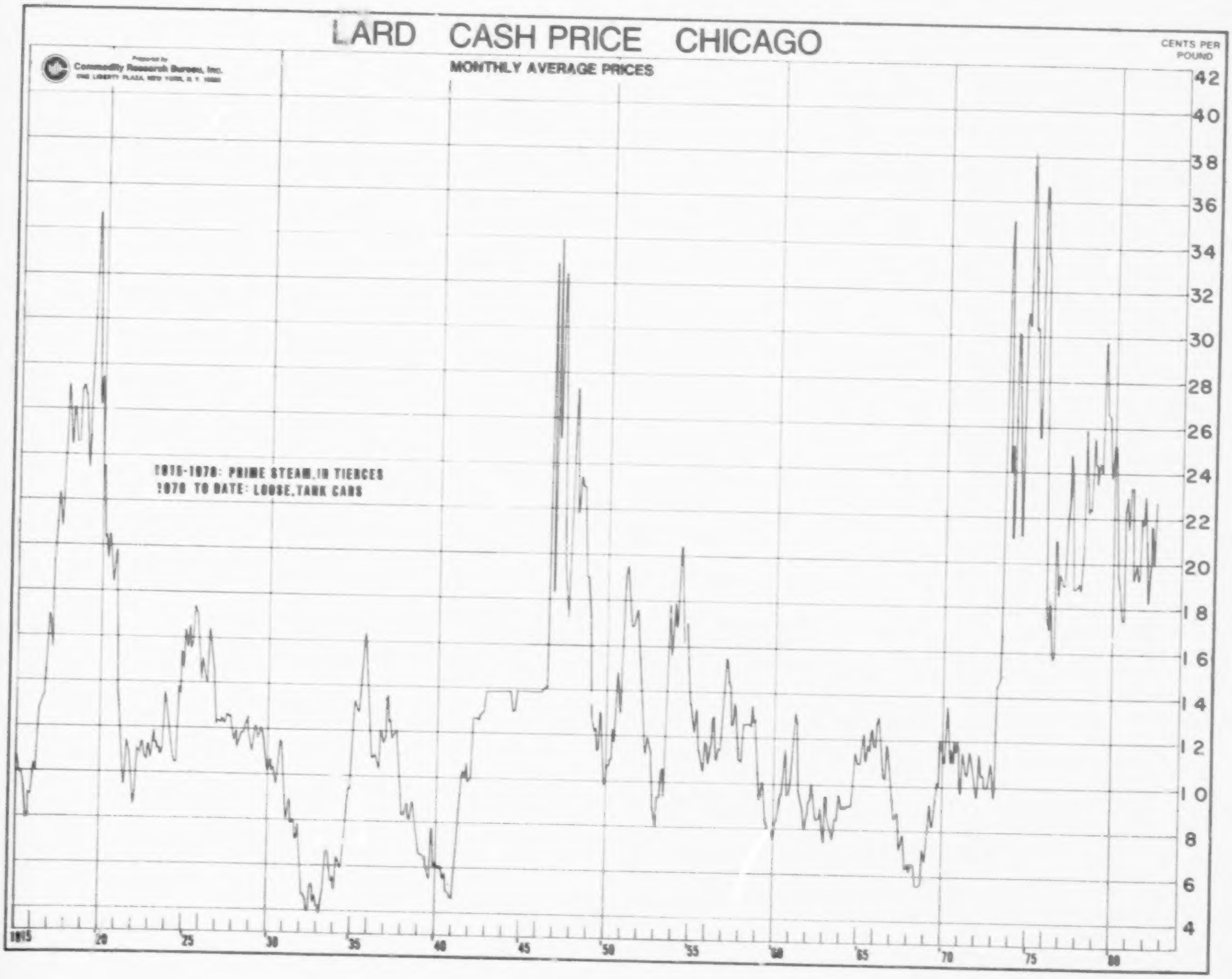
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1975	37.0	30.0	28.0	28.5	28.5	24.0	38.0	36.0	37.5	35.0	30.0	18.5	30.9
1976	17.0	17.4	17.0	15.8	15.6	16.0	19.0	19.3	21.0	17.8	19.0	19.1	17.8
1977	20.5	22.4	21.5	25.0	26.0	23.1	20.5	19.0	17.9	21.5	19.0	19.3	21.3
1978	19.4	20.8	23.8	25.6	22.0	22.5	23.3	22.3	26.0	24.5	24.5	23.3	23.2
1979	24.5	24.0	25.1	29.8	26.8	—	—	—	26.6	25.1	23.8	25.1	25.6
1980	22.0	21.6	19.3	19.0	18.0	17.5	17.5	22.5	23.0	21.6	23.3	23.3	20.7
1981	20.0	19.0	19.6	19.9	19.4	19.6	22.0	21.8	22.8	21.5	21.0	18.4	20.4
1982	20.0	21.5	20.0	22.0	22.8								

Source: Economic Research Service, U.S.D.A.

United States Cold Storage Holdings of all Lard[1], on First of Month In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1969	94.0	91.7	96.7	92.3	93.2	80.3	75.5	62.1	55.0	55.8	58.3	47.7
1970	70.1	64.8	61.6	67.1	75.2	65.3	64.9	66.5	54.2	59.8	59.0	74.0
1971	82.5	90.7	85.8	80.9	79.8	90.9	101.1	89.1	81.6	76.9	82.7	82.4
1972	99.9	78.1	66.1	64.3	80.7	89.6	83.2	64.1	52.3	44.0	44.0	57.5
1973	51.2	52.1	44.5	49.3	49.1	49.9	39.9	33.8	32.2	28.4	35.1	37.3
1974	43.7	56.3	45.4	53.3	55.7	55.2	50.0	54.5	50.7	47.7	37.7	33.2
1975	35.7	34.0	34.4	26.4	31.3	31.9	23.6	21.6	19.2	22.6	18.7	25.0
1976	28.3	33.5	36.1	29.3	31.9	32.0	32.2	26.9	28.4	33.6	37.5	37.4
1977	33.9	31.5	37.6	38.4	50.2	50.1	47.2	47.4	38.2	31.7	32.1	32.1
1978	28.5	30.0	29.7	33.9	35.7	35.4	36.8	32.4	29.7	35.1	29.5	32.0
1979[2]	38.1	40.5	39.6	35.8	42.8	47.9	46.0	51.4	46.4	43.9	44.7	52.0
1980	49.9	54.4	61.3	62.5	57.9	51.7	59.1	57.1	55.0	43.5	44.6	48.7
1981	49.4	50.4	46.9	42.2	40.5	40.1	40.7	42.6	39.6	35.6	35.6	39.1
1982[2]	37.0	35.3	32.1									

[1] Stocks in factories & warehouses (except that in hands of retailers). [2] Preliminary. *Source: Bureau of the Census*



Lard Exports[2] of the United States by Selected Country of Destination In Thousands of Metric Tons[3]

Year	Asia	Belgium & Lux.	Canada	Belize	Bolivia	Neth. Antilles	Colombia	W. Germany	Haiti	Mexico	Ecuador	Netherlands	Poland	United Kingdom	Yugoslavia	Grand Total
1969	—	—	19.9	—		—	—	.9	3.4	35.2	—	—	—	186.5	—	261.9
1970	—	—	16.1	—		—	—	.8	1.2	44.5	—	—	—	259.3	14.3	365.9
1971	—	—	9.2	—		—	—	1.0	1.4	26.0	—	—	—	229.7	5.3	282.3
1972	—	—	11.8	—		—	—	1.2	3.2	26.3	—	—	—	116.1	—	164.4
1973	—	—	6.5	2.9		.5	.1	1.1	2.4	41.5	—	—	—	58.0	—	113.3
1974	—	2.0	20.1	1.9		.3	4.8	—	2.4	51.4	—	—	—	75.6	—	161.4
1975[3]	—	—	9.3	.9		.1	.1	—	.3	24.4	—	—	—	4.6	—	39.8
1976	4.3	4.1	17.0	1.4		.1	16.0	—	1.3	29.1	4.3	8.4	—	29.7	—	117.3
1977	.3	1.7	20.1	1.3	.3	.2	.1	—	1.2	31.1	25.4	12.2	3.4	19.3	—	82.6
1978	.4	—	19.4	1.4	—	.3	.2	—	.9	26.7	15.5	4.9	—	3.8	—	54.2
1979	.3	—	9.3	1.7	1.1	.4	.1	—	1.1	26.7	—	—	—	1.7	—	43.5
1980[1]	.2	—	7.9	1.5	.3	.3	1.1	—	1.0	24.0	—	—	2.5	1.7	—	41.9
1981																

[1] Preliminary. [2] Excludes exports for civilian relief & shipments by CARE. [3] Data prior to 1975 are in MILLIONS OF POUNDS. *Source: Foreign Agricultural Service, U.S.D.A.*

U.S. Exports of Lard & Other Rendered Pork Fat[1] In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1969	11.7	14.1	29.1	10.7	39.5	15.4	11.1	23.5	21.7	30.0	41.6	13.2	262
1970	24.5	38.1	37.3	12.9	29.9	18.8	38.0	37.2	27.9	37.3	22.4	41.8	366
1971	8.9	40.5	44.4	39.3	30.9	18.1	10.6	15.8	19.6	12.2	38.2	3.9	282
1972	18.6	18.0	14.7	8.5	11.6	12.6	12.7	5.4	14.5	11.8	31.7	4.4	164
1973	18.5	4.9	7.2	10.7	5.3	17.2	4.1	7.1	3.4	13.5	15.5	5.8	113
1974	9.4	13.8	11.3	8.4	21.4	28.5	17.5	5.5	10.5	13.5	9.5	12.1	161
1975	5.4	11.6	7.0	9.4	5.6	8.8	4.3	3.3	7.2	8.4	7.2	9.4	88
1976	14.0	11.8	10.3	15.8	11.7	15.2	11.1	10.5	9.1	15.8	26.7	29.0	181
1977	—	—	20.9	18.4	10.8	15.3	8.6	13.4	23.4	27.5	18.2	20.2	182
1978	6.7	11.1	8.3	8.6	12.9	16.7	10.1	12.9	10.3	16.7	16.3	9.7	140
1979	7.5	12.0	12.0	6.8	12.8	8.3	8.1	7.1	5.9	13.0	10.5	11.0	115
1980	9.1	6.1											

[1] Except grease. *Source: U.S. Department of Commerce*

United States Production of Lard[1] (Commercial Production[2]) In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1969	160.0	137.6	149.1	152.5	141.7	134.8	140.9	130.9	154.1	166.8	141.6	144.7	1,755
1970	144.1	120.7	139.4	153.0	130.0	136.5	131.5	135.4	157.6	175.5	174.2	178.1	1,776
1971	166.1	129.2	193.4	162.4	146.0	157.8	133.7	141.9	148.1	139.6	158.9	152.7	1,830
1972	123.2	105.0	148.9	131.5	138.7	130.8	101.6	120.8	108.0	122.7	130.3	103.1	1,464
1973	110.6	91.8	108.7	95.4	122.5	105.3	82.8	81.9	80.1	106.1	108.1	94.9	1,181
1974[2]	89.9	84.5	87.4	100.7	107.6	89.4	81.8	115.0	97.8	124.1	102.9	89.2	1,170
1975	103.0	87.0	94.0	96.0	86.0	74.0	68.0	67.0	75.0	78.0	83.0	84.0	995
1976	87.0	67.0	90.0	85.0	80.0	76.0	74.0	87.0	91.0	103.0	108.0	95.0	1,043
1977	73.0	65.0	100.0	85.0	85.0	85.0	73.0	86.0	89.0	93.0	102.0	85.0	1,021
1978	83.0	75.0	83.0	80.0	85.0	85.0	73.0	81.0	82.0	88.0	85.0	91.0	1,002
1979	83.0	70.0	84.0	92.0	102.0	94.0	92.0	99.0	92.0	117.0	112.0	92.0	1,120
1980[3]	104.0	95.0	98.0	111.0	110.0	99.0	95.0	86.0	99.0	86.0	96.0	102.0	1,173
1981[3]	101.0	102.0	100.0	104.0	95.0	91.0	89.0	86.0	97.0	104.0	99.0	104.0	1,172
1982[3]	88.0	77.0											

[1] Includes "Rendered Pork Fat." [2] Data prior to 1974 are for FEDERAL INSPECTED ONLY. [3] Preliminary.
Source: Department of Agriculture

Lead

U.S. mine production of recoverable lead in 1981 was 19 percent below that of 1980, according to preliminary data of the Bureau of Mines, U.S. Department of the Interior. The sharp reduction in mine output was attributed to labor interruptions at seven major mines and two smelters in the southeast Missouri lead district. Refinery production of lead in 1981 was 10 percent lower than in the preceding year. Secondary production, as reported by refiners, was off almost 30 percent due to a lack of scrap availability.

Reported U.S. consumption of lead in 1981 was about 13 percent below the 1980 level. But total consumption, including estimated undistributed consumption, was about 5 percent above the 1980 level, according to preliminary data of the U.S. Bureau of Mines. The small overall increase in consumption was attributed to demand from the battery industry during a period of extremely cold weather experienced during the latter part of 1981, which more than offset the continuing decline in use for lead as a gasoline additive. According to a trade association, domestic consumption of lead scrap in 1981 was almost 15 percent below the year earlier level. Major end uses of lead in 1981 were: batteries, gasoline additives and other automotive applications—65 percent; paints, ammunition, and electrical uses—30 percent; other uses—5 percent.

U.S. imports of lead ore and concentrate (lead content) in 1981 were almost 33 percent larger than in the preceding year, and refined metal imports were up about 25 percent. Exports of lead material excluding scrap were sharply lower than in 1980 and scrap exports were down 50 percent.

December 31, 1981 stocks of refined and antimonial lead at primary refineries in the U.S. were 44 percent higher than at the end of 1980. However, stocks of lead held by consumers and secondary smelters at the end of 1981 were 22 percent lower than on December 31, 1980.

The U.S. producer price for lead, which was 34 cents per pound in January 1981, eased to 30 cents in February. The price then increased to 46 cents per pound by August reflecting the critical labor situation in the southeast Missouri lead district. The producer price declined to 34 cents per pound, with the settlement of strikes and continued lack of strong demand. LME prices tended to parallel the U.S. prices. The monthly average U.S. primary producer price for lead in 1981 was 36.53 cents per pound vs. 42.46 cents in 1980, and the LME price averaged 33.30 cents per pound vs. 41.21 cents in 1980, according to *Metals Week*.

Futures Market

Lead futures are traded on the London Metal Exchange (LME).

World Smelter (Primary & Secondary) Production of Lead[5] In Thousands of Metric[6] Tons

Year	Australia[3]	Belgium[4]	Bulgaria	Canada[3]	China[2]	France	W. Germany	Japan	Mexico[3]	Peru[3]	Spain	United States	U.S.S.R.	Yugoslavia[3]	World Total[5]
1970	388.6	98.5	108.7	204.6	110.0	132.2	124.3	230.4	165.6	79.3	83.3	666.7	485.0	107.4	3,628
1971	356.7	87.4	112.7	185.6	110.0	117.2	108.5	237.1	167.0	74.0	112.5	650.0	500.0	109.3	3,591
1972	383.7	102.3	112.4	206.0	110.0	150.1	112.4	246.1	171.8	94.3	111.1	688.6	510.0	96.4	3,745
1973	374.8	125.3	118.0	206.0	110.0	183.6	94.6	251.4	190.6	91.8	96.3	674.5	520.0	124.2	3,838
1974	371.4	109.8	124.0	139.4	110.0	174.8	128.0	251.3	220.7	88.8	87.7	673.0	525.0	125.5	3,829
1975	343.2	113.5	121.0	189.1	110.0	149.2	101.7	214.1	190.6	78.4	81.5	636.1	530.0	139.0	3,633
1976[6]	342.6	91.7	112.0	231.0	140.0	191.5	278.3	305.7	234.7	74.1	101.7	1,251	600.0	140.3	4,990
1977	337.9	73.6	120.0	240.6	150.0	207.3	319.9	305.2	216.2	79.2	118.6	1,306	610.0	145.0	5,158
1978	356.0	74.7	120.0	254.1	160.0	216.9	306.1	293.9	215.4	74.6	127.2	1,334	620.0	140.4	5,227
1979	385.2	60.7	119.0	252.4	170.0	211.5	316.5	294.3	223.0	85.7	144.6	1,377	625.0	133.6	5,389
1980[1]	360.7	81.7	119.0	230.9	170.0	213.7	301.4	291.5	195.0	78.3	144.7	1,223	625.0	133.0	5,131
1981[2]	350.0			260.0					200.0	90.0				135.0	5,000

[1] Preliminary. [2] Estimated. [3] Refined & bullion. [4] Includes scrap. [5] Prior to 1976 data does not include secondary production. [6] Data prior to 1976 are in THOUSANDS OF SHORT TONS. *Source: Bureau of Mines*

U.S. Mine Production of Recoverable Lead In Thousands of Metric[3] Tons

Year	Arizona	California	Colorado	Idaho	Illinois	New York	Missouri	Montana	Nevada	New Mexico	Oklahoma	Utah	Virginia	Washington	Wisconsin	Total U.S.[2]
1970	.3	1.8	21.9	61.2	1.5	1.3	421.8	1.0	.4	3.6	.8	45.4	3.4	6.8	.8	571.8
1971	.9	2.3	25.7	66.6	1.2	.9	429.6	.6	.1	3.0	—	38.3	3.4	5.2	.8	578.6
1972	1.8	1.2	31.3	61.4	1.3	1.1	489.4	.3	—	3.6	—	20.7	3.4	2.6	.8	618.9
1973	.8	—	27.8	61.4	.5	2.6	484.9	.2	—	2.6	—	13.9	2.6	2.2	.8	603.0
1974	1.1	—	24.6	51.7	.5	3.1	562.1	.2	1.8	2.4	N.A.	10.5	3.1	1.3	1.3	663.9
1975[3]	.4	.1	24.6	45.7	N.A.	2.7	468.1	.2	2.7	1.8	—	11.5	2.3	N.A.	N.A.	563.8
1976	.3	.1	24.3	48.7	N.A.	2.9	454.5	.1	.5	N.A.	N.A.	14.8	1.8	N.A.	N.A.	553.0
1977	.3	—	20.9	42.9	N.A.	2.5	453.8	.1	.7	N.A.	N.A.	9.7	2.0	1.1	N.A.	537.5
1978	.4	N.A.	15.2	44.8	N.A.	1.0	461.8	.1	.7	N.A.	—	2.5	1.8	N.A.	N.A.	529.7
1979	.4	N.A.	7.6	42.6	N.A.	.5	472.1	.3	—	N.A.	—	N.A.	1.6	—	N.A.	525.6
1980	.4	N.A.	10.3	38.6	N.A.	.9	497.2	.3	—	—	—	—	1.6	N.A.	—	549.5
1981[1]	.7		11.3	38.5			388.5	.2	—							444.1

[1] Preliminary. [2] Includes Alaska. [3] Data prior to 1975 are in THOUSANDS OF SHORT TONS. *Source: Bureau of Mines*

LEAD

Salient Statistics of Lead in the United States In Thousands of Metric[5] Tons

Year	Net Import Reliance as a % of Apparent Consumption	Production of Refined Lead From					Total Value of Refined Mil. $	Secondary Lead Recovered				Total Value of Secondary Mil. $	Dec. 31 Stocks		Avg. Price (¢ per Lb.)	
		Domestic Ores[2]	Foreign Ores[3]	Total Primary	Secondary Sources	Total		As Refined Metal	In Antimonial Lead	In Other Alloys	Total		Producers' Stocks[6]	Consumers' Stocks	New York	London
1973		567.3	107.3	674.5	—	674.5	219.8	186.1	375.8	92.4	654.3	213.2	89.8	124.1	16.29	19.47
1974		580.1	92.9	673.0	—	673.0	303.3	238.2	371.5	89.0	698.7	314.8	121.1	166.6	22.53	26.83
1975[5]	11	481.0	96.1	577.1	—	577.1	273.9	246.1	285.9	65.4	597.3	283.5	142.0	120.9	21.53	18.73
1976	15	515.8	76.5	592.3	—	592.3	301.6	282.1	310.2	66.8	659.1	335.7	110.4	117.6	23.10	20.46
1977	13	486.7	62.0	548.7	.1	548.8	371.4	303.1	383.4	71.1	757.6	512.8	91.1	121.4	30.70	28.00
1978	9	501.6	63.5	565.2	1.2	566.4	419.3	282.6	409.9	76.5	769.2	570.7	98.7	125.2	33.65	29.86
1979	4	530.0	45.6	575.6	2.9	578.5	668.0	352.2	378.8	70.3	801.4	930.0	89.3	153.2	52.64	54.52
1980[1]	6	508.2	39.4	547.6	2.1	549.7	512.6	315.2	306.7	53.7	675.6	632.4	126.0	126.2	42.46	41.21
1981[4]	10			500.0		497.1					600.0			98.1	36.53	33.30
1982																

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[1] Preliminary. [2] And base bullion. [3] At primary smelters & refineries. [4] Estimates. [5] Data prior to 1975 are in THOUSANDS OF SHORT TONS. [6] Net exporter. *Source: Bureau of Mines*

Consumption of Lead in the United States by Products In Thousands of Metric[5] Tons

Year	Ammunition	Bearing Metal	Building[2]	Cable Covering	Calking Lead	Casting Metals	Collapsible Tubes	Foil	Red Lead & Litharge	Solder	Storage Batteries & Oxides[4]	Chemicals Petrol. Refin.[6]	Type-Metal	Brass and Bronze	Total Consumption
1973	81.5	15.7	44.7	43.0	20.1	7.2	2.9	5.0	89.6	71.8	769.4	274.4	21.9	1.7	1,541.2
1974	87.1	14.6	37.7	43.4	19.7	7.5	2.5	4.4	96.2	66.3	851.9	250.5	20.5	2.0	1,599.4
1975	75.1	12.2	39.1	22.1	14.3	7.7	2.2	3.2	65.5	57.3	699.4	208.6	16.2	2.5	1,297.1
1976	73.5	13.1	38.2	15.9	12.5	6.7	2.3	5.1	85.4	63.3	822.4	239.8	15.0	13.4	1,490.1
1977	68.4	12.0	28.4	15.1	9.6	6.0	2.1	3.6	78.1	64.3	945.9	232.9	12.6	15.7	1,582.3
1978[5]	55.8	9.5	23.1	13.9	9.9	3.6	—91.6—			68.4	879.3	178.3	10.8	16.5	1,432.7
1979	53.2	9.6	27.6	16.4	8.0	22.7	—90.8—			54.3	814.4	186.9	10.0	18.7	1,358.3
1980[1]	48.7	7.8	28.4	13.4	5.7	19.0	—78.4—			41.4	645.4	127.9	9.0	14.0	1,070.3
1981[3]	50.4	6.4	12.0	11.8	2.1	9.1	—65.7—			23.1	599.7	111.4	7.1	11.1	1,125.3
1982															

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[1] Preliminary. [2] Chiefly pipes, traps & bends & sheet lead. [3] Estimate. [4] Also grids, posts, etc. [5] Data prior to 1978 are in THOUSANDS OF SHORT TONS. [6] Data prior to 1978 are for GASOLINE ANTI-KNOCK ADDITIVES. *Source: Bureau of Mines*

U.S. Foreign Trade of Lead In Thousands of Metric[4] Tons

Year	Exports				Imports for Consumption					General Imports From:						
										Ore, Flue Dust & Matte			Pigs & Bars			
	Unwrought Lead[3]	Wrought Lead[5]	Scrap	Total	Ores, Flue Dust or Fume & Mattes	Base Bullion	Pigs & Bars	Reclaimed Scrap, Etc.	Value Million $	Australia	Peru	Canada	Australia	Mexico	Peru	Canada
1973	—66.6—		59.9	126.5	94.4	—	178.1	—	71.2	21.7	24.0	18.1	45.6	20.4		
1974	53.6	8.4	59.4	121.3	62.7	.8	118.4	—	74.2	19.3	26.2	16.0	3.3	28.5	40.0	
1975	18.4	2.0	50.0	71.2	45.0	.5	99.1	1.7	59.9	15.9	15.7	28.9	—	29.6	19.9	40.1
1976	2.9	3.0	46.9	52.8	89.0	2.3	142.0	2.6	92.2	11.2	9.3	27.7	6.1	44.3	19.7	30.7
1977[4]	4.3	4.7	77.5	86.5	88.8	7.3	230.1	3.5	196.9	16.6	6.6	16.0	19.9	71.8	30.4	75.4
1978	3.2	5.1	98.6	106.9	61.9	4.3	225.4	3.3	203.0	6.5	6.3	19.6	16.3	80.2	25.7	70.4
1979	7.4	3.3	119.7	130.4	44.4	1.7	182.6	4.0	248.3	1.9	12.4	12.8	17.3	73.6	17.9	71.3
1980[1]	156.5	8.0	119.7	284.2	29.6	.3	81.3	2.9	116.5	3.0	18.0	8.5	11.3	28.6	3.3	34.9
1981[2]			59.4		27.2	.4	100.1	2.2		2.2	14.1	23.5	10.9	33.7	2.9	50.8
1982																

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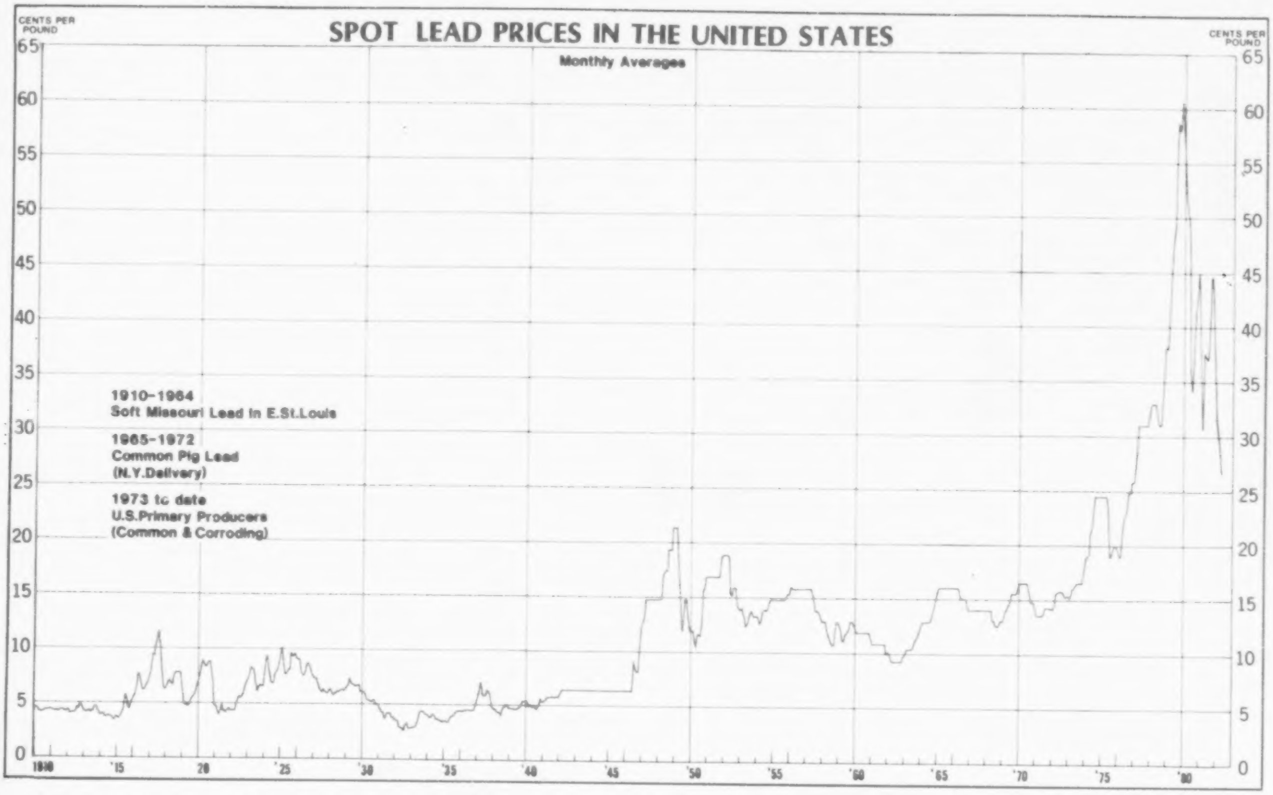
[1] Preliminary. [2] Estimates. [3] And lead alloys. [4] Data prior to 1977 data are in THOUSANDS OF SHORT TONS. [5] Blocks, Pigs, etc. *Source: Bureau of Mines*



SPOT LEAD PRICES IN THE UNITED STATES

Monthly Averages

Average Price of Pig Lead, U.S. Primary Producers[1] (Common Corroding) In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1971	13.50	13.50	13.50	13.50	13.50	13.70	14.25	14.25	14.25	14.25	14.25	14.19	13.89
1972	14.15	14.63	15.50	15.63	15.75	15.75	15.75	15.71	15.50	15.21	15.25	15.25	15.34
1973	15.09	15.42	15.97	16.00	16.25	16.50	16.50	16.50	16.50	16.50	16.50	17.96	16.31
1974	18.95	19.00	19.30	21.16	21.50	23.00	24.50	24.50	24.50	24.50	24.50	24.50	23.19
1975	24.50	24.50	24.50	24.50	23.21	19.00	19.00	19.52	20.00	20.00	20.00	19.48	21.52
1976	19.00	19.00	20.30	22.00	22.90	23.00	24.26	24.75	24.75	24.77	25.71	25.75	23.02
1977	26.99	28.95	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.02	32.00	32.86	30.74
1978	33.00	33.00	33.00	33.00	31.23	31.00	31.00	32.50	34.19	36.05	38.18	38.00	33.68
1979	40.64	43.74	46.09	48.00	49.44	57.14	58.68	57.96	58.47	60.74	58.30	57.11	53.03
1980	51.06	50.00	49.52	45.34	36.00	34.19	35.95	40.95	42.43	45.00	44.06	40.43	42.91
1981	34.13	30.63	35.32	37.68	37.00	38.23	41.25	44.64	42.52	37.86	34.34	31.75	37.10
1982	29.90	28.87	27.98	26.57									

[1] Prior to Nov. 1973 prices are for Common Pig (N.Y. Delivery—Carload Lots). *Source: American Metal Market*

U.S. Mine Production of Recoverable Lead In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1971	45.2	41.9	52.8	47.6	46.0	46.1	45.7	48.2	51.0	48.7	49.3	56.1	578.6
1972	48.8	53.3	55.6	52.2	54.1	51.2	52.6	56.9	50.7	51.6	46.5	45.4	618.9
1973	53.5	50.0	45.3	40.1	55.9	43.9	51.4	55.7	51.4	53.7	49.0	53.2	603.0
1974	57.1	52.8	58.0	52.3	53.3	54.9	54.8	58.7	50.0	64.9	53.2	53.9	663.9
1975	55.6	52.6	58.5	56.0	53.3	50.8	37.8	40.1	50.6	56.3	49.0	52.9	621.5
1976	50.4	52.0	57.8	50.6	51.0	50.6	48.1	51.0	49.2	49.6	49.0	50.4	609.5
1977	45.0	49.2	56.9	53.2	48.3	50.9	41.9	52.6	46.4	49.2	48.6	50.3	592.5
1978	49.8	45.0	57.1	49.4	54.3	40.1	35.5	47.6	49.5	55.5	50.0	49.1	582.9
1979[1]	47.6	44.0	42.5	37.0	41.8	42.0	41.4	48.8	34.6	50.0	46.5	43.9	525.6
1980[1]	51.6	50.4	50.0	48.1	50.0	46.3	43.5	41.7	39.3	48.5	39.6	41.2	559.5
1981[1]	42.3	40.5	43.0	26.4	27.5	17.1	31.7	31.8	47.8	47.3	39.6	41.2	444.1

[1] Preliminary. *Source: Bureau of Mines*

Production[1] of Lead in the United States by Refiners In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1971	51.3	46.7	53.5	53.8	56.5	58.0	57.9	50.5	53.8	66.6	58.0	65.0	671.6
1972	62.7	59.1	63.4	42.8	66.4	58.6	60.1	62.7	56.2	61.7	62.3	58.5	714.5
1973	63.9	65.5	65.9	56.8	65.3	67.9	52.4	70.8	64.9	65.5	64.3	59.2	762.3
1974	62.5	60.3	60.2	52.8	60.2	51.8	59.6	60.6	59.7	58.2	60.7	62.6	709.2
1975	65.0	55.0	60.4	49.5	51.5	45.0	46.4	52.3	52.5	57.9	53.2	52.6	641.4
1976	57.7	56.3	56.2	58.5	61.5	54.1	52.9	57.1	50.2	53.5	49.1	51.3	658.4
1977	51.2	46.6	57.7	50.2	51.2	46.9	41.5	46.9	50.2	56.5	58.0	55.2	612.0
1978	60.0	50.1	55.3	55.5	49.1	44.8	42.5	50.4	51.5	60.9	55.1	54.2	629.2
1979	53.0	52.2	60.6	52.5	58.1	55.0	52.6	49.9	45.4	52.9	54.6	54.3	641.1
1980	56.9	49.3	54.1	47.5	47.0	47.1	52.0	48.2	50.2	52.2	48.4	53.5	606.4
1981	58.0	53.6	58.2	52.7	35.0	24.4	33.0	45.1	43.7	46.1	39.4	44.0	533.2
1982	50.3	45.2											

[1] Represents refined lead produced from domestic ores by primary smelters plus small amount of secondary material passing through these smelters. Includes GSA metal purchased for remelt. *Source: American Bureau of Metal Statistics, Inc.*

Shipments[1] (Domestic) of Lead in the United States by Refiners In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1971	50.5	49.0	61.0	58.0	57.6	67.5	46.8	64.1	65.1	72.6	66.9	61.1	720.1
1972	56.4	66.3	73.2	50.4	59.9	54.7	46.5	51.5	55.6	69.2	62.6	58.0	704.2
1973	70.0	69.4	68.1	64.4	67.8	70.4	62.3	69.4	69.2	75.4	72.6	54.5	823.4
1974	72.6	64.6	63.9	57.2	60.8	56.9	65.8	60.9	61.4	63.5	58.9	49.7	736.2
1975	47.2	36.7	37.3	44.2	49.7	38.2	45.4	62.5	64.9	67.6	47.0	54.1	594.9
1976	49.2	54.2	58.8	63.6	62.0	54.8	59.3	66.1	55.8	62.7	57.2	51.2	694.9
1977	57.2	56.0	62.9	53.6	50.7	51.3	42.2	47.4	51.6	54.7	55.0	55.7	638.3
1978	59.9	49.7	51.3	43.5	49.0	44.1	44.3	56.3	56.1	62.8	54.5	53.1	624.5
1979	56.7	54.7	58.9	52.2	58.5	55.2	56.1	47.0	45.9	52.9	39.7	30.8	608.6
1980	40.5	37.6	38.9	28.8	30.1	35.3	36.6	48.0	60.1	55.6	31.0	38.6	481.0
1981	31.9	42.5	51.7	48.8	41.9	33.4	34.2	51.7	55.1	35.5	28.2	24.2	479.0
1982	39.3	35.8											

[1] Includes GSA metal. *Source: American Bureau of Metal Statistics, Inc.*

Total Stocks of Lead[1] in the United States at Refiners, at End of Month In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1970	30.8	33.5	36.9	47.3	53.5	63.3	79.1	87.4	86.6	90.9	93.6	98.3
1971	99.1	96.8	89.6	85.4	84.3	77.3	88.4	74.8	63.5	57.6	48.7	52.3
1972	58.3	50.4	38.0	29.1	36.3	40.6	55.6	67.7	69.3	64.0	64.4	67.3
1973	59.4	54.7	39.9	33.2	35.3	32.3	20.5	24.4	26.8	22.8	20.7	27.6
1974	40.8	35.5	35.2	28.1	21.3	19.2	18.9	21.2	21.7	20.8	25.2	38.1
1975	55.5	73.8	96.7	101.6	104.5	111.8	110.7	100.7	87.7	77.7	83.7	82.1
1976	91.5	92.8	90.6	87.8	85.3	84.6	76.7	67.7	61.7	54.3	45.6	46.0
1977	37.9	28.2	23.5	20.9	20.1	15.1	13.7	13.3	12.4	14.8	16.5	16.0
1978	16.3	16.6	20.8	32.6	32.3	33.0	31.0	24.9	20.1	18.1	18.7	19.8
1979	15.8	13.4	15.2	15.0	14.6	14.3	10.8	13.7	13.0	13.9	27.8	51.3
1980	67.8	75.0	71.6	83.8	90.8	82.7	66.3	53.8	35.2	29.2	46.5	60.9
1981	86.6	92.3	88.9	87.8	71.2	61.6	59.9	52.6	38.5	49.1	57.5	62.8
1982	65.4	67.2										

[1] Stocks at own plant & elsewhere. *Source: American Bureau of Metal Statistics, Inc.*

Total[1] Lead Consumption in the United States In Thousands of Short Tons

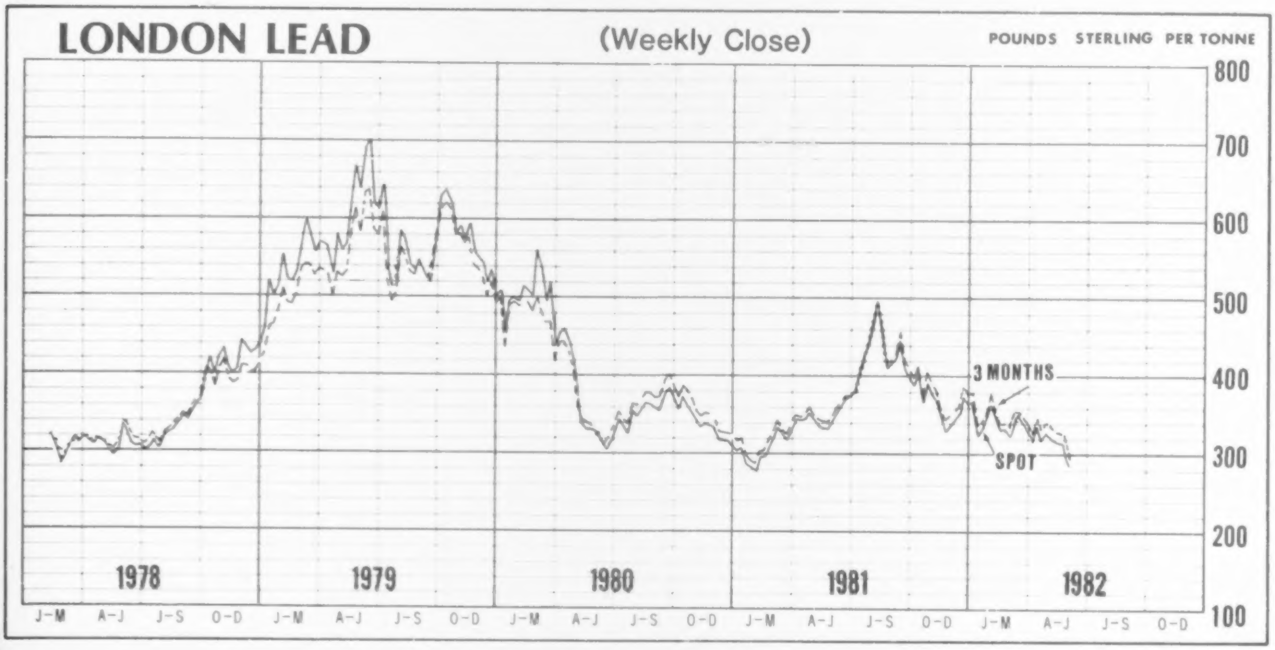
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1972	122.3	123.7	132.3	122.4	129.0	126.7	91.4	127.4	126.0	132.2	131.4	120.5	1,485
1973	135.3	131.7	143.2	128.4	128.8	129.1	101.9	125.7	124.8	140.7	131.4	120.2	1,541
1974	141.0	129.4	130.9	126.5	142.6	121.5	112.8	144.0	143.7	156.8	136.4	113.8	1,599
1975	105.1	98.9	99.2	105.1	102.3	94.7	88.6	115.5	123.0	133.7	115.8	115.3	1,297
1976	116.3	123.3	136.1	125.7	123.4	123.3	103.4	120.7	127.4	137.4	128.0	125.2	1,490
1977	132.2	122.1	149.5	138.0	128.3	133.6	108.1	131.6	142.5	141.4	126.2	128.9	1,582
1978	122.5	115.0	125.2	122.5	117.4	121.6	99.5	125.2	124.9	140.4	130.9	123.4	1,433
1979	114.6	111.0	124.3	109.5	116.7	108.5	91.3	106.0	109.3	112.1	106.3	94.0	1,358
1980	97.3	84.9	90.0	83.8	84.1	77.2	68.2	79.5	95.6	103.0	92.5	92.0	1,070
1981	98.9	90.7	95.9	91.2	89.1	91.0	81.1	93.1	99.9	110.4	94.5	89.6	1,125

[1] Represents total consumption of primary & secondary lead as metal, in chemicals, or in alloys. *Source: Bureau of Mines*

U.S. Lead Recovered from Scrap (Lead Content) In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1971	46.4	48.1	47.0	50.8	48.1	46.4	42.4	46.1	49.1	51.6	50.6	46.0	596.8
1972	45.3	41.8	54.2	51.9	55.0	50.4	48.9	49.6	51.4	49.5	51.6	45.4	616.6
1973	55.3	56.2	56.4	56.8	59.1	56.3	45.7	52.9	47.3	51.4	51.5	48.2	654.3
1974	50.3	54.8	54.9	50.9	53.7	46.4	47.0	49.2	54.3	58.4	56.4	56.8	698.7
1975	47.3	43.6	50.0	46.3	51.6	45.6	46.0	47.4	55.6	59.8	61.0	53.8	658.5
1976	52.0	55.1	64.6	57.0	53.5	57.8	49.8	57.4	56.1	58.4	64.9	57.3	726.6
1977	54.3	58.3	68.2	61.4	61.1	64.9	54.0	62.6	65.7	62.6	60.3	61.2	835.1
1978	54.7	56.4	63.7	57.8	64.3	62.1	54.1	62.6	68.5	71.2	70.1	67.6	753.1
1979[1]	54.6	60.5	65.1	64.1	62.0	65.2	51.3	58.1	58.2	65.0	60.7	54.3	801.4
1980[1]	59.2	55.4	59.6	59.1	51.2	57.1	46.0	52.2	56.0	50.2	58.1	54.9	675.6
1981[1]	46.5	43.9	43.8	42.4	44.1	46.7	46.4	49.1	52.5	50.9	52.2	48.7	567.3

[1] Preliminary. *Source: Bureau of Mines*



Lumber and Plywood

The lumber industry is complex and widely distributed throughout the United States, with operations in nearly all of the 50 states. Approximately 80 percent of all the lumber produced is softwood, and 20 percent is hardwood. The West produces about 60 percent of the softwood lumber, the South produces 30 percent, and the remainder is produced in other regions of the country. Virtually all of the hardwood lumber is produced in the eastern half of the United States.

Residential construction is the most important direct market for the solid wood products industries that produce lumber, plywood, and particle board. Single-family housing construction is the most important market for the U.S. lumber industry, which is also affected by trends in other types of construction activity, industrial production, international trade, and the availability of raw materials.

Lumber

The softwood lumber industry started 1981 with concern over the failure of the housing recovery which was expected to occur during the last half of 1981. Softwood lumber demand was more seriously affected than hardwood demand in 1981 because softwood sales are more dependent on residential construction. Estimated volume of softwood lumber in 1981 was about 23.5 billion board feet, nearly 2 percent below the 1980 level, while total consumption of softwood lumber was about 31 billion board feet, about 3 percent lower than in 1980. Residential use of softwood lumber accounted for about 34.5 percent of total consumption in 1981 versus 36.3 percent in 1980. Non-residential construction consumed about 5.7 billion board feet of lumber, and repair and remodeling accounted for about 7.9 billion board feet, both virtually unchanged from 1980 levels.

According to Department of Commerce data, U.S. housing starts in 1981 dropped to 1.084 million units, representing a 16.1 percent reduction from 1980 housing starts, and the lowest starts since 1946. A major factor adversely influencing housing starts in 1981 was the high cost of home mortgages. The 30-year home mortgage average rate of interest rose steadily throughout 1981 to a peak of 18.63 percent in early October and then eased to 17.04 percent by the end of the year. The interest rate for conventional 25 to 30-year mortgages remained high during the first quarter of 1982, averaging 17.20 percent in mid-March. The interest rate for FHA-VA insured mortgages, which had been increased 1 percentage point in January 1982 to 16.5 percent, was reduced to 15.5 percent in early March 1982.

Housing starts in 1982 were projected by the Western Wood Products Association (WWPA) in March 1982 at 1.2 million units, slightly above the 1981 level. However, single-family housing starts were expected to slip to 64 percent of the total from 65 percent in 1980. Single-family units, which use more lumber per unit than multi-family housing, have generally represented about 70 percent of the total starts, but the housing production mix could change to a larger percentage of multi-family units and to smaller single-family houses. Such a change could affect the total demand for lumber for residential construction.

The principal markets for hardwood lumber include the furniture, materials handling, and flooring industries. The furniture industry, the largest user of quality hardwood, was operating at slightly below normal levels in 1981. Weak demand forced furniture producers to curtail production and reduce work weeks. Production in the pallet industry was about 5 percent lower than in 1980, but the oak flooring industry showed a 12 percent gain in production in the first 8 months of 1981 compared to the same period in 1980. The increase in demand came from the home improvement industry.

Lumber imports were stimulated in the first half of 1981 by anticipated improvement in housing construction, but when residential construction failed to recover in the latter half of the year, imports declined. Imports for 1981 were estimated at 9.7 billion board feet, off 2.0 percent from the 9.9 billion board imported in 1980. Canada supplies about 97 percent of all U.S. lumber imports; mostly softwood species such as hemlock, spruce, Douglas fir, pine, and cedar.

Salient Statistics of Lumber in the United States

Year	Industrial Roundwood Used for					Imports	Exports	Apparent Consumption	Fuelwood Consumption	Apparent Consumption, All PDT's	National Forest Stumpage Prices				
	Lumber	Pulp Products	Plywood & Veneer	Other Pdts.[2]	Total[2]						All Eastern Hardwoods	Douglas Fir	Southern Pine	Western Hemlock	Ponderosa Pine
	In Million Cubic Feet										$ Per 1,000 Board Ft.				
1969	5,415	3,585	1,050	455	11,030	2,515	1,295	12,250	620	12,870	30.20	82.20	51.70	45.10	71.00
1970	5,215	3,835	1,020	425	11,105	2,430	1,540	11,995	540	12,530	26.90	41.90	44.10	20.50	32.10
1971	5,385	3,560	1,175	415	11,035	2,670	1,295	12,410	500	12,910	24.60	49.10	52.20	20.60	37.60
1972	5,535	3,520	1,300	405	11,440	3,060	1,545	12,960	475	13,435	34.30	71.70	65.60	49.00	65.80
1973	5,670	3,755	1,320	405	11,925	3,150	1,755	13,325	505	13,830	44.70	138.10	93.40	99.20	92.30
1974	5,095	4,220	1,150	395	11,540	2,755	1,805	12,490	535	13,025	44.40	202.40	76.20	110.80	100.60
1975	4,980	3,485	1,165	385	10,570	2,220	1,685	11,105	570	11,675	34.00	169.50	57.00	68.80	71.20
1976	5,475	3,805	1,355	380	11,815	2,840	1,870	12,785	600	13,385	34.90	176.20	87.00	79.70	103.20
1977	5,730	3,645	1,425	390	11,965	3,310	1,795	13,480	635	14,115	37.90	225.90	100.30	89.30	131.40
1978	5,825	3,745	1,460	400	12,240	3,755	1,845	14,150	680	14,830	41.10	250.30	134.50	113.60	164.70
1979[1]	5,680	4,090	1,395	410	12,525	3,660	2,135	14,050	780	14,830	46.80	394.40	155.20	200.80	239.00
1980[1]											52.40	432.20	155.40	212.70	206.10

[1] Preliminary, subject to revision. [2] Excludes fuelwood. Includes cooperage logs, poles & piling, fence posts, etc.

Sources: National Lumber Manufacturers Ass'n.: U.S. Dept. of Commerce; Forest Service

Lumber imports from Canada accounted for about 25 percent of the total U.S. lumber consumption in 1981. Lumber exports, which reached a record 2.46 billion board feet in 1980, declined about 1.6 percent in 1981. Shipments to Japan, usually the largest market for U.S. lumber exports, dropped about 30 percent in the first half of 1981 because of excessive inventories and a still-depressed housing market in Japan. Canada was the major recipient of U.S. lumber exports in 1981, with purchases up about 45 percent. China, a new market with a strong future potential, purchased 30 million board feet of lumber. (Prior to World War II, China was one of the major foreign markets for U.S. lumber.)

Plywood

Demand for plywood contracted sharply after the housing market collapse in early 1980. About 85 to 90 percent of this industry's shipments are softwood plywood; the rest is softwood veneer, which is used in the manufacture of plywood. Softwood plywood shipments in the U.S. decreased about 3 percent in 1981 to an estimated 15.25 billion square feet (⅜" basis). The reduction would have been greater but for growth in exports, improvement in non-residential construction markets, and a strong remodeling/repair, do-it-yourself market. An expanded export market for softwood plywood was one of the few bright spots in the industry in 1981, with exports up about 65 percent from the year-earlier figure of 373 million square feet, to an estimated 615 million square feet. The reduction of relative prices for many plywood items and weak demand for plywood in the United States were important factors in the expansion of plywood exports, as more firms turned to overseas markets to increase their sales. However, a strong U.S. dollar during most of the year partly offset the lower product prices.

A 5 percent increase in U.S. softwood plywood shipments was expected for 1982, to about 16 billion square feet, based primarily on an anticipated recovery of about 15 percent in 1982 housing starts from the 1981 level. The market share for conventional softwood plywood is projected to shrink as structural particleboard products gain ground, but output is expected to be above the depressed 1981 level as the industry emerges from its cyclical trough.

Particleboard

U.S. shipments of particleboard declined 2 percent in 1981, to 2.89 billion board feet. Exports were up 12 percent, to about 140 million square feet. When production of lumber, plywood, and other wood products declines, raw material availability for the particleboard industry is curtailed.

Futures Markets

Western Plywood futures are traded on the Chicago Board of Trade. Lumber futures are actively traded on the Chicago Mercantile Exchange, where Plywood and Stud Lumber futures are also listed.

United States Lumber Shipments In Millions of Board Feet

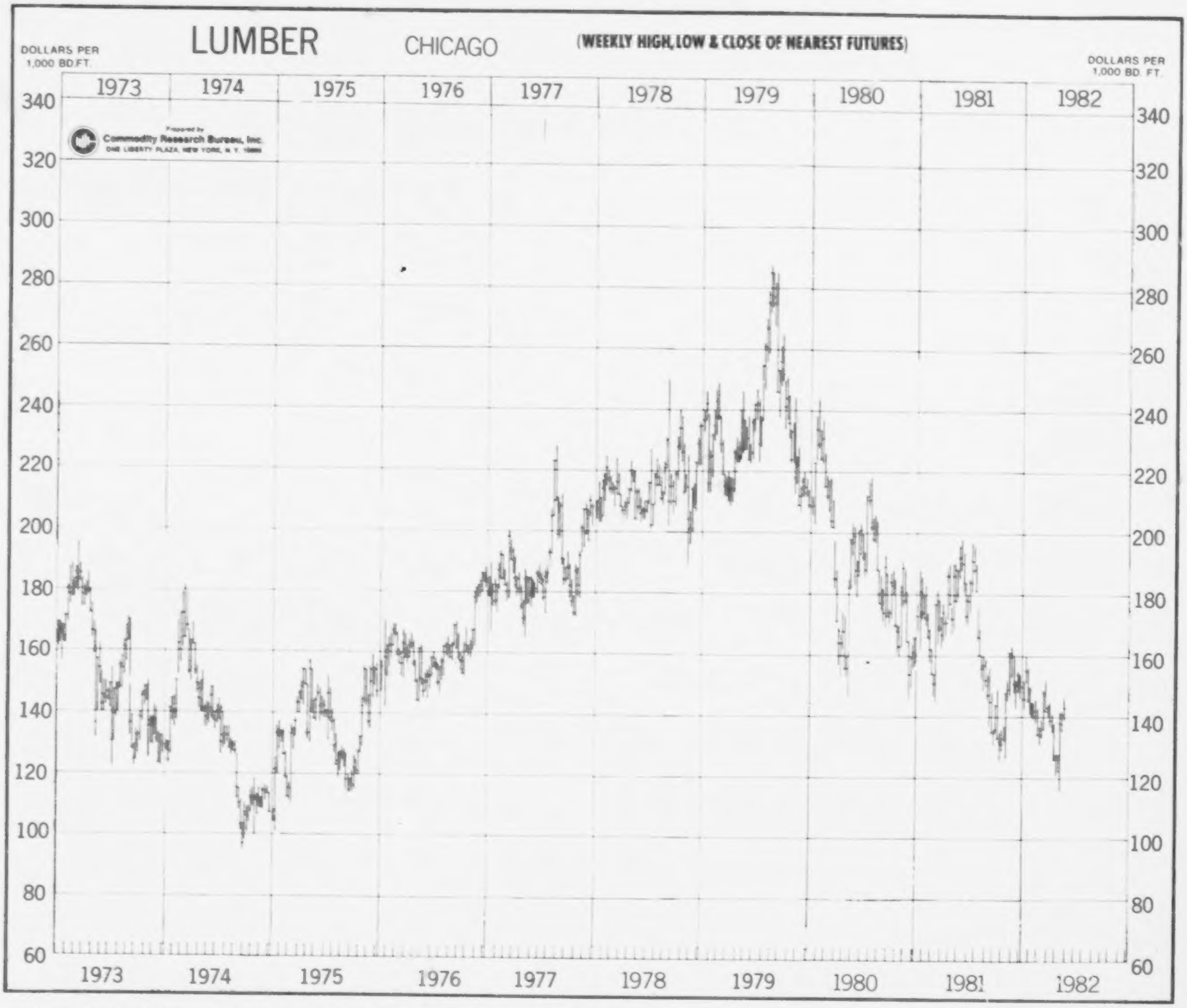
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1971	2,738	3,075	3,472	3,560	3,313	3,537	3,209	3,345	3,294	3,336	3,067	3,015	37,769
1972	2,942	3,186	3,566	3,422	3,628	3,429	3,236	3,468	3,387	3,520	3,203	2,776	39,180
1973	3,153	3,102	3,474	3,386	3,351	3,264	3,044	3,402	3,096	3,312	3,008	2,623	38,353
1974	2,647	2,850	3,219	3,377	3,310	2,949	2,736	2,888	2,584	2,658	2,265	1,978	33,432
1975	2,047	2,164	2,507	2,843	2,820	2,739	2,820	2,851	3,061	3,097	2,689	2,647	31,769
1976	2,762	2,790	3,107	3,155	2,944	3,150	3,122	3,324	3,167	3,167	2,911	2,951	35,612
1977	2,683	2,873	3,362	3,364	3,314	3,387	3,077	3,358	3,296	3,269	2,859	2,983	37,899
1978	2,699	2,741	3,158	3,133	3,355	3,548	3,156	3,357	3,250	3,262	3,116	2,907	37,712
1979[1]	2,813	2,756	3,279	3,107	3,329	3,087	3,128	3,408	3,106	3,224	2,777	2,589	36,514
1980[1]	2,707	2,791	2,538	2,343	2,512	2,530	2,454	2,716	2,708	2,851	2,494	2,350	31,422
1981[1]	2,424	2,379	2,752	2,755	2,633	2,765	2,395	2,431	2,260	2,382	2,045		
1982													

[1] Preliminary. *Source: National Lumber Manufacturers' Association*

Stocks (Gross) of Lumber in the United States, Beginning of Month In Millions of Board Feet

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1971	6,365	6,428	6,277	6,143	6,042	5,895	5,741	5,723	5,594	5,532	5,397	5,358
1972	5,288	5,155	5,040	4,857	4,704	3,944	4,368	4,236	4,184	4,097	4,149	4,094
1973	4,152	3,954	3,926	3,802	3,896	3,835	3,765	3,758	3,813	3,967	4,108	4,157
1974	4,457	4,499	4,596	4,568	4,648	4,627	4,683	4,904	5,042	5,196	5,229	5,160
1975	5,134	5,137	5,123	5,064	5,000	5,052	5,124	5,101	5,165	5,090	5,140	4,982
1976	4,938	4,894	4,926	4,963	5,016	5,123	4,922	4,763	4,794	4,854	4,991	5,062
1977	5,086	5,171	5,228	5,325	5,197	5,133	4,964	4,854	4,787	4,859	4,876	4,855
1978	4,850	4,963	5,128	5,201	5,190	5,038	4,877	4,705	4,632	4,669	4,740	4,731
1979[1]	4,795	4,811	4,932	4,964	4,975	4,868	5,003	4,893	4,843	4,875	5,063	5,207
1980[1]	5,210	5,301	5,374	5,721	5,769	5,568	5,534	5,570	5,659	5,776	5,832	5,826
1981[1]	5,805	5,883	6,065	6,098	6,123	6,213	6,015	6,103	6,232	6,284	6,285	6,075
1982												

[1] Preliminary. *Source: National Lumber Manufacturers' Association*



Month End Open Interest of Lumber Futures at Chicago In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	7,523	8,770	8,202	8,390	9,233	8,362	7,730	8,078	7,551	7,365	6,547	8,122
1979	8,420	9,059	7,851	7,127	8,055	7,380	8,901	11,039	10,426	10,664	10,125	10,260
1980	10,839	10,587	9,948	10,130	11,452	11,736	12,461	11,644	13,734	14,251	12,829	9,338
1981	8,882	9,053	8,029	8,102	7,639	8,161	8,554	7,586	7,690	8,809	8,808	9,067
1982	9,328	8,982	6,990	7,460								
1983												

Source: Chicago Mercantile Exchange

Volume of Trading of Lumber Futures at Chicago In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	47,910	43,703	46,876	4[illegible],759	42,578	36,330	38,252	46,138	49,347	55,495	54,371	55,739	560,498
1979	60,964	57,594	52,316	43,097	46,530	50,265	56,421	62,923	56,421	71,581	63,777	39,980	649,478
1980	59,063	61,288	73,412	86,057	81,960	68,528	76,296	65,740	73,660	76,984	59,076	58,376	838,676
1981	57,173	45,937	54,295	60,517	51,007	58,879	49,427	49,428	45,592	57,021	55,044	51,614	635,934
1982	51,268	45,192	44,717	44,115									
1983													

Source: Chicago Mercantile Exchange

Residential Construction Contracts Awarded (All Types) in U.S. In Millions of Dollars

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1971	1,631	1,818	2,729	3,168	3,310	3,485	3,357	3,255	3,196	3,171	3,001	2,997	34,714
1972	2,667	2,664	3,617	3,971	4,428	4,375	3,864	4,671	4,135	4,298	3,663	3,120	44,975
1973	3,195	3,277	4,643	4,512	4,754	4,612	4,224	4,233	3,638	3,673	3,299	2,341	45,696
1974	2,231	2,678	3,374	3,924	3,862	3,546	3,350	3,060	2,503	2,457	1,931	1,715	34,404
1975	1,540	1,532	2,272	2,987	3,072	3,116	3,081	2,833	2,951	3,167	2,478	2,259	31,261
1976	2,168	2,557	3,636	4,017	3,932	4,175	4,190	4,201	3,824	4,119	3,761	3,264	44,169
1977	2,967	3,519	5,328	5,503	5,803	6,043	5,703	6,198	5,641	5,534	5,359	4,340	62,017
1978	3,925	3,863	6,333	6,850	7,801	7,917	6,823	7,120	6,496	7,080	5,973	4,715	74,949
1979[1]	4,468	4,588	6,870	5,969	8,076	7,277	7,008	7,069	6,248	6,864	4,704	4,304	74,557
1980[1]	4,055	4,337	4,584	4,373	4,495	5,029	6,105	5,897	6,069	6,785	5,847	5,570	63,668
1981[1]	4,207	4,206	5,929	6,569	5,887	5,904	5,853	4,894	4,844	4,872	3,737	3,739	60,063
1982[1]	3,008												

[1] Preliminary. *Source: F. W. Dodge Co.*

United States Imports of Saw Mill Products In Millions of Board Feet

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1970	515	423	488	535	572	562	478	540	553	533	514	422	6,095
1971	505	473	683	563	650	761	767	624	797	516	582	679	7,599
1972	757	703	768	745	889	761	888	690	820	815	886	689	9,428
1973	935	760	883	837	931	899	823	623	453	764	780	640	9,540
1974	634	547	700	721	815	765	653	541	569	530	414	361	7,249
1975	337	377	536	571	589	671	677	431	422	388	415	552	5,968
1976	477	527	627	701	669	573	890	680	781	715	759	779	8,178
1977	691	721	906	890	996	999	934	920	938	858	956	911	10,698
1978	865	840	939	915	1,173	1,117	1,194	1,119	1,014	1,091	979	954	12,199
1979	925	761	998	925	1,237	1,011	1,010	1,043	999	924	909	771	11,513
1980	727	923	896	655	730	830	876	804	863	867	892	779	9,859
1981	756	848	966	980	991	934	842	465	659	754	728	590	9,513
1982	530												

Source: Department of Commerce

Lumber Production[1] in the United States In Millions of Board Feet

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1970	2,902	2,859	3,164	3,203	3,080	2,967	3,004	3,045	3,104	3,201	2,733	2,639	34,548
1971	2,794	2,983	3,339	3,451	3,168	3,384	3,194	3,220	3,242	3,199	3,028	2,924	36,693
1972	2,832	3,076	3,383	3,272	3,420	3,301	3,102	3,417	3,303	3,528	3,193	2,664	38,044
1973	3,012	3,074	3,456	3,272	3,290	3,207	3,038	3,456	3,250	3,453	3,057	2,710	38,297
1974	2,741	2,945	3,191	3,457	3,302	3,006	2,895	3,024	2,736	2,691	2,194	1,930	34,097
1975	2,072	2,148	2,480	2,779	2,849	2,814	2,797	2,914	2,986	3,147	2,530	2,500	31,583
1976	2,821	2,804	3,144	3,209	2,960	2,949	2,963	3,265	3,226	3,305	2,972	2,921	35,760
1977	2,822	2,930	3,388	3,260	3,253	3,160	2,975	3,290	3,368	3,268	2,839	2,944	37,667
1978	2,843	2,904	3,222	3,127	3,203	3,333	2,988	3,263	3,285	3,333	3,102	2,931	37,657
1979[2]	2,877	2,877	3,306	3,119	3,219	3,143	3,018	3,355	3,131	3,412	2,914	2,631	37,061
1980[2]	2,798	2,855	2,879	2,257	2,307	2,486	2,479	2,783	2,818	2,903	2,480	2,329	31,885
1981[2]	2,523	2,542	2,818	2,780	2,651	2,588	2,483	2,554	2,307	2,379	1,831		
1982													

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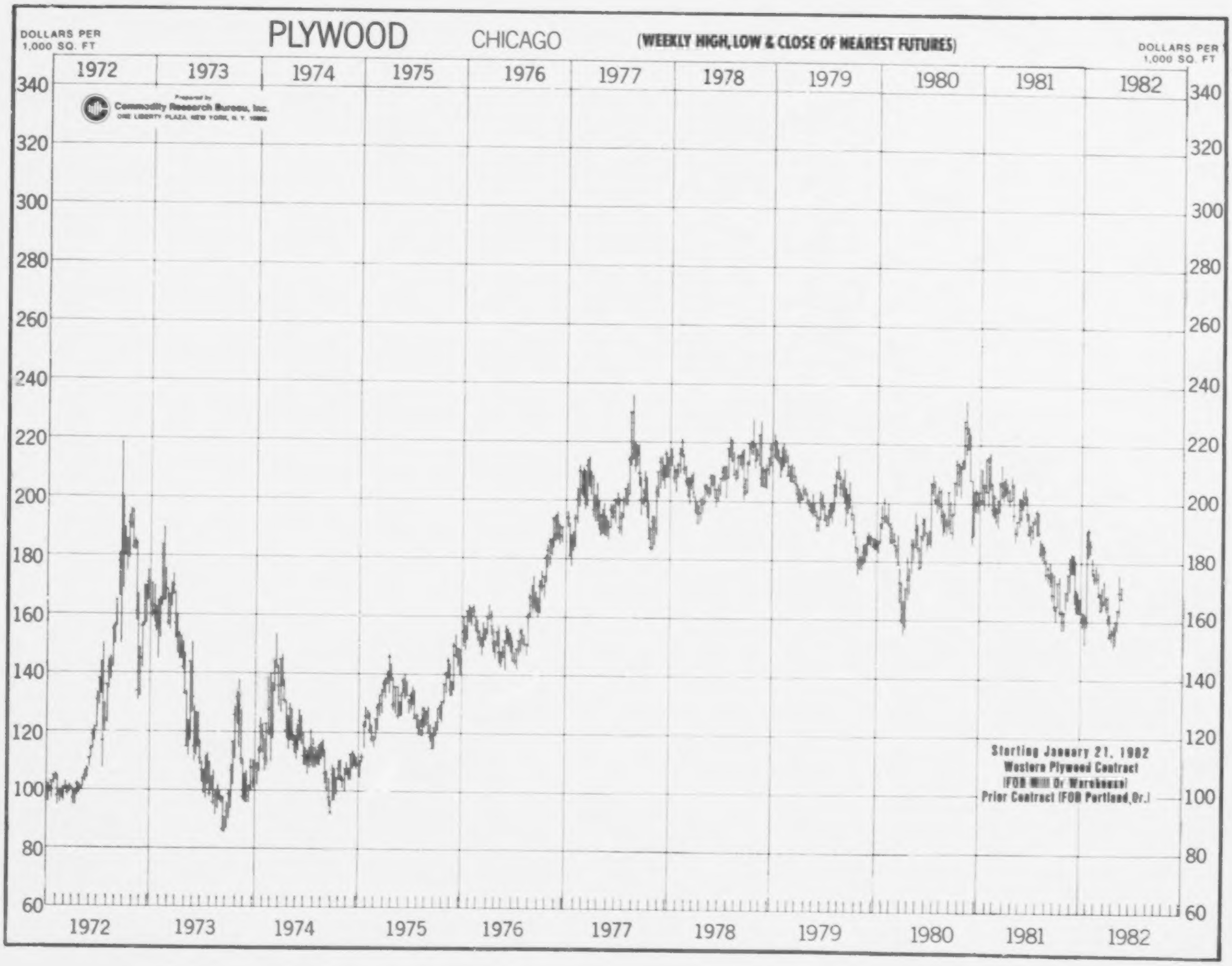
[1] Adjusted with Census reports on lumber production. [2] Preliminary. *Source: National Lumber Manufacturers' Association*



Month End Open Interest of Plywood Futures at Chicago In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	7,272	7,996	6,638	5,740	6,733	6,507	6,069	6,634	4,882	5,228	4,585	4,484
1979	4,364	4,430	3,284	3,621	3,932	3,637	3,584	4,181	3,711	4,048	4,422	3,742
1980	3,316	3,196	3,260	5,416	5,017	5,097	3,974	3,685	3,987	4,210	4,133	3,468
1981	3,491	4,411	4,032	4,317	4,251	4,447	4,210	3,455	3,292	3,277	3,891	4,379
1982	4,465	3,794	3,788	2,839								
1983												

Source: Chicago Board of Trade

Volume of Trading of Plywood Futures at Chicago In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	29,066	30,771	25,071	24,144	21,797	19,237	18,913	18,056	16,346	24,834	17,702	15,046	261,483
1979	18,102	16,761	13,070	9,364	10,836	12,574	9,389	11,543	11,150	14,958	10,053	9,220	146,570
1980	10,605	11,908	12,452	19,084	15,266	13,393	16,903	13,384	13,185	14,191	12,859	16,310	169,550
1981	13,282	14,439	17,667	20,894	15,858	20,131	11,441	11,439	8,651	12,965	9,433	14,612	144,318
1982	9,375	15,717	11,819	13,959									
1983													

Source: Chicago Board of Trade

High, Low & Closing Prices of May Lumber Futures at Chicago In Dollars per 1,000 Board Feet

Year of Delivery	Year Prior to Delivery										Delivery Year					Life of Delivery
	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Range
1978 High	—	—	—	211.9	212.4	202.0	201.9	206.9	208.0	216.5	218.9	223.4	219.0	214.0	222.5	223.4
Low	—	—	—	196.5	193.8	192.0	192.8	184.5	187.0	203.9	203.0	208.5	205.2	203.2	213.1	184.5
Close	—	—	—	210.8	198.6	199.5	198.5	190.8	207.1	214.5	209.9	212.3	207.8	213.9	214.7	—
1979 High	—	—	—	189.0	193.0	195.5	206.5	211.0	202.5	210.9	219.8	234.5	228.3	231.2	246.0	246.0
Low	—	—	—	181.6	183.5	187.0	192.5	200.5	185.1	187.2	201.7	218.5	209.8	209.4	223.1	181.6
Close	—	—	—	183.3	192.0	192.7	202.0	201.3	194.6	209.9	217.6	223.4	211.8	225.2	245.2	—
1980 High	—	—	—	215.0	217.0	227.0	239.5	241.0	227.5	230.2	244.4	242.2	219.3	183.0	160.0	244.4
Low	—	—	—	208.5	211.0	214.0	222.0	197.7	201.2	216.5	215.3	215.0	181.5	153.1	146.5	146.5
Close	—	—	—	212.7	214.6	222.7	233.5	206.3	222.8	218.4	234.1	216.3	185.5	161.5	152.2	—
1981 High	221.0	210.2	222.0	225.5	233.5	222.0	215.5	214.0	220.0	210.7	205.2	198.3	181.4	190.4	181.0	233.5
Low	176.0	164.0	202.0	210.6	218.0	191.9	195.3	194.2	205.7	175.5	185.3	169.5	164.3	163.2	167.1	163.2
Close	178.1	204.5	220.8	218.5	219.1	196.9	198.5	207.4	208.5	194.5	195.8	169.8	169.6	178.4	175.5	—
1982 High	—	—	—	220.3	214.3	201.5	186.0	183.0	182.8	180.0	166.5	153.1	151.9	145.2		
Low	—	—	—	204.6	199.0	183.3	160.0	157.1	162.4	163.4	147.6	142.7	137.5	120.6		
Close	—	—	—	211.0	199.3	184.0	163.2	164.8	179.2	169.1	154.0	142.9	142.4	126.8		
1983 High	192.7	186.5														
Low	180.0	172.0														
Close	185.0	174.0														

Source: Chicago Mercantile Exchange

High, Low & Closing Prices of May Plywood Futures at Chicago In Dollars per 1,000 Square Feet

Year of Delivery	Year Prior to Delivery										Delivery Year					Life of Delivery
	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Range
1978 High	217.5	215.5	202.9	212.5	212.5	212.8	210.5	214.8	214.0	220.0	221.9	222.5	212.0	201.8	206.1	222.5
Low	209.5	199.0	194.0	196.0	194.0	190.0	197.5	190.9	192.6	208.1	206.0	208.1	195.5	191.5	199.2	190.0
Close	213.5	200.0	196.1	209.5	202.5	207.8	206.0	192.4	213.3	219.5	212.0	210.5	196.8	199.0	203.3	—
1979 High	208.0	203.8	206.0	199.0	199.6	203.8	211.0	213.3	208.5	211.8	217.3	221.0	215.5	205.5	203.4	221.0
Low	200.0	196.0	195.0	192.5	192.5	196.2	196.8	205.0	196.0	198.6	204.6	208.4	199.5	198.1	195.0	192.5
Close	200.0	202.3	196.2	196.3	198.6	200.0	205.0	207.0	201.5	209.5	216.1	210.3	201.2	202.3	195.7	—
1980 High	205.5	208.9	206.4	204.0	202.0	201.0	201.7	203.5	192.0	197.5	206.0	203.9	194.9	182.0	193.5	208.9
Low	203.2	203.0	201.0	198.0	195.0	195.5	194.0	181.1	183.5	189.0	188.5	188.5	165.5	155.2	170.5	155.2
Close	203.8	206.0	204.2	201.0	198.5	197.3	199.0	184.5	190.1	193.5	200.7	191.6	172.4	171.5	192.5	—
1981 High	207.0	209.5	214.0	314.0	221.0	216.0	215.0	222.5	232.3	226.5	221.0	221.8	212.5	209.3	196.8	232.3
Low	181.5	178.5	194.5	200.4	201.0	196.2	197.0	201.5	218.5	194.0	205.5	199.3	198.2	194.2	186.5	178.5
Close	185.5	195.2	205.5	203.0	210.5	201.5	203.8	219.5	223.5	208.0	220.3	203.4	205.0	195.2	192.0	—
1982 High	—	240.5	239.0	240.0	228.0	224.0	220.0	212.6	214.3	214.0	190.0	180.0	183.6	169.0		
Low	—	200.0	224.0	228.0	216.0	205.0	200.0	194.0	199.2	196.8	180.0	174.0	162.5	151.0		
Close	—	231.0	239.0	232.0	218.0	210.1	200.5	200.0	213.3	199.6	180.0	175.0	165.7	156.5		
1983 High	—	—														
Low	—	—														
Close	—	—														

Source: Chicago Board of Trade

Average Index Price of Softwood Plywood—Western —$ Ths. Board Feet Index 1967 = 100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1973	256.79	273.54	292.16	304.50	320.40	338.44	338.44	346.20	354.21	360.41	379.34	405.23	330.81
1974	414.54	426.95	433.16	445.57	451.78	451.78	451.78	484.45	463.87	448.35	435.94	431.28	444.95
1975[1]	513.09	513.09	513.09	513.09	506.11	506.11	506.17	501.27	501.27	501.27	497.60	494.66	505.56
1976	494.90	494.90	500.54	502.99	502.99	502.99	502.99	507.89	510.34	510.34	510.34	517.69	504.91
1977	530.06	536.18	559.46	584.20	589.10	598.54	609.56	609.56	643.13	650.48	653.78	677.06	603.43
1978	710.01	741.86	740.64	779.84	795.76	812.18	812.42	812.42	852.72	852.72	869.32	874.47	804.53
1979[3]	354.3	351.7	351.5	345.6	329.8	304.1	319.1	324.3	327.6	327.4	309.4	300.4	328.8
1980	293.8	308.0	302.3	256.9	275.4	301.7	324.5	346.2	324.0	324.2	330.3	343.3	310.9
1981	326.4	330.0	323.3	332.2	319.7	329.4	322.1	311.0	301.9	283.7	286.7	298.1	313.7
1982	291.3	288.4	290.6										

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[1] Data prior to 1975 are for F. G., 1" x 4", R. L., dried, mixed carlot, f.o.b. mill (rail shipment) [Douglas Fir Drop Siding (C & Better)]. [2] Data prior to 1972 are for Douglas Fir FLOORING. [3] Prior to 1979 prices are for Lumber Redwood, Boards, Clear, F.G., Dry in $ per Ths. Board Feet. *Source: Bureau of Labor Statistics* (0831–01)

LUMBER AND PLYWOOD

Average Index Price of Ponderosa Pine[1] Softwood Lumber—No. 2 Index Dec. 1980 = 100[2]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1969	115.76	129.86	145.12	163.54	145.05	110.28	82.19	79.64	74.90	76.02	77.83	86.00	107.18
1970	90.55	84.43	82.45	82.95	90.14	94.14	88.00	82.39	81.31	78.54	75.64	74.90	83.79
1971	72.36	75.01	84.94	101.21	99.29	92.70	96.40	106.24	109.10	106.57	105.14	108.28	96.44
1972	113.20	117.69	121.77	127.01	130.52	134.59	135.18	139.34	138.78	138.44	138.05	136.37	130.91
1973	139.85	154.21	183.12	212.59	243.95	228.13	197.73	160.65	155.33	154.98	155.90	168.99	179.62
1974	193.90	190.23	204.37	234.99	231.32	200.60	174.35	138.40	121.26	100.46	99.66	120.06	151.38
1975	126.78	132.83	150.35	154.31	173.62	170.71	145.95	141.17	131.78	128.87	127.30	—	131.97
1976	154.01	177.50	198.52	209.92	189.73	165.91	161.57	168.63	182.50	198.68	198.57	206.15	184.31
1977	227.16	232.18	245.58	251.21	239.98	216.44	219.96	232.57	236.48	235.28	215.40	226.17	231.53
1978	247.58	263.85	264.90	267.57	240.07	251.25	232.33	236.92	254.23	267.17	N.A.	317.01	237.07
1979	304.49	332.11	366.87	371.17	342.59	338.16	306.16	301.95	309.48	316.41	277.35	240.42	317.26
1980	252.62	291.36	314.97	242.34	215.48	252.06	310.05	327.35	304.06	293.25	306.22	340.83	287.55
1981[2]	102.9	102.3	103.7	107.8	111.2	110.4	106.9	103.6	100.0	93.0	90.6	93.4	102.2
1982	N.A.	95.0	97.1										

[1] No. 3 1" x 12", B.L. (6' and over). [2] Prices prior to 1981 are for Ponderosa Pine in $ per Ths. Board Feet. *Source: Bureau of Labor Statistics* (0811–0312.99)

Average Index Price of Softwood Yellow Southern Pine (Dressed) Flooring[1] (C & Better) Index 1967 = 100[2]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1969	173.36	180.90	186.69	188.51	188.51	186.41	181.55	180.88	180.88	183.68	185.78	187.15	183.69
1970	187.15	187.15	187.15	187.15	189.35	189.35	189.35	189.06	189.06	189.83	189.83	189.02	188.62
1971	188.20	188.98	188.16	192.28	192.28	194.19	199.04	199.04	199.04	199.04	199.04	199.04	194.86
1972	200.34	202.10	203.03	207.54	207.54	205.97	205.97	205.97	207.14	207.52	209.87	209.87	206.07
1973	209.87	219.91	243.04	253.82	266.89	298.90	277.67	287.47	315.23	315.23	320.13	320.13	277.36
1974	321.77	321.77	329.93	346.27	346.27	347.90	352.80	352.80	352.80	352.80	341.37	341.37	342.90
1975	341.37	341.37	344.63	344.63	346.27	344.63	336.47	336.47	336.47	329.93	331.57	333.20	338.92
1976	339.73	341.37	346.27	346.27	346.27	346.27	348.55	351.17	354.43	355.09	356.07	356.07	348.96
1977	356.07	356.07	359.33	362.60	364.23	367.50	375.67	380.57	387.10	388.73	392.00	395.27	373.76
1978	400.17	403.23	406.87	405.07	409.97	409.97	413.23	419.11	421.40	424.01	424.67	426.30	413.67
1979[2]	307.0	306.4	315.7	319.0	315.8	315.2	320.7	333.7	343.6	344.4	341.1	328.2	324.2
1980	322.0	322.2	317.2	281.2	280.1	287.3	296.4	304.1	295.1	282.3	286.9	293.7	322.2
1981	291.9	292.2	294.7	308.4	313.9	309.5	297.0	291.6	279.4	273.6	267.0	277.0	291.7
1982	278.0	273.3	273.6										

[1] Flooring, C and better, F. G., 1" x 4" x S/L. [2] Prices prior to 1979 are in $ per Ths. Board Feet. *Source: Bureau of Labor Statistics* (0811–02)

Average Index Prce of Douglas Fir Softwood Lumber—Dimension, Construction, Dried, 2" × 4", R.L.[1] Index 1967 = 100[2]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1969	130.11	137.49	147.11	140.41	125.96	109.95	95.71	95.08	94.61	94.28	96.15	95.37	113.52
1970	92.86	91.43	90.66	92.06	92.68	90.80	90.33	93.00	95.04	94.27	92.85	90.68	92.22
1971	91.45	98.65	110.95	111.50	112.12	116.72	125.72	129.92	128.88	128.59	127.45	130.23	117.68
1972	134.97	135.33	135.70	137.42	141.64	143.55	149.32	149.72	150.30	150.70	151.28	151.28	144.27
1973	152.46	168.46	193.96	197.22	209.91	192.13	180.93	180.19	190.27	176.11	170.43	170.27	181.86
1974	159.25	163.06	181.51	186.18	179.03	167.63	162.47	152.62	146.22	135.85	139.09	133.21	158.84
1975	138.41	146.90	147.29	156.60	169.67	161.54	165.47	169.77	166.79	160.09	157.56	166.40	158.88
1976	175.43	178.29	184.90	180.05	176.06	171.45	187.49	195.59	215.08	207.79	204.02	218.77	191.24
1977	228.38	225.50	232.09	226.05	225.42	213.79	230.93	242.51	256.92	237.27	218.03	227.70	230.38
1978	238.08	241.81	246.28	238.48	238.43	245.28	245.00	272.06	274.74	266.66	271.51	262.40	253.39
1979[2]	357.2	360.1	371.0	381.1	381.8	378.3	387.4	408.4	424.0	410.4	378.7	368.8	383.9
1980	363.3	367.1	358.8	327.1	329.6	353.2	358.7	360.0	357.1	354.5	352.9	353.4	353.0
1981	347.2	330.4	321.8	332.7	328.5	333.1	320.1	318.3	296.8	277.6	268.0	269.3	312.0
1982	269.1	262.2	261.8										

[1] Dried, S4S, mixed carlots, f.o.b. mill, rail shipment. [2] Prices prior to 1979 are in $ per Ths. Board Feet. *Source: Bureau of Labor Statistics* (0811–01)

Magnesium

Total domestic production of magnesium in 1981 was slightly less than that of 1980, according to preliminary data of the U.S. Bureau of Mines. Domestic magnesium metal production is derived from natural brine solutions and the mineral dolomite. The manufacture of aluminum-base alloys accounted for an estimated 57 percent of total magnesium metal consumption in 1981; wrought products—18 percent; reducing agent—8 percent; cathodic protection—7 percent; manufacture of nodular cast iron—4 percent; other uses—6 percent. In 1981, about 20 percent of the total metal reported consumed was from old scrap. The U.S. is a net exporter of magnesium. Total exports in 1981 were about 40 percent lower than in 1980, while imports were about double those of 1980. Norway and the Netherlands are normally the major sources of U.S. imports of magnesium metal, whereas Ireland and Greece are the normal major sources of magnesium compound imports.

The demand for magnesium compounds remained strong in 1981, according to the U.S. Bureau of Mines, and was not dependent on imported materials. Estimated domestic production was some 4 percent larger than in 1980 and expected to increase further in 1982. More than 80 percent of the consumption of magnesium compounds was for the production of high-temperature, basic refractories. The remainder was used for the preparation of caustic-calcined and specified magnesias and other magnesium compounds.

There was no National Defense Stockpile goal for, or inventory of, magnesium metal in 1981. World resources from which magnesium steel may be recovered are virtually unlimited, and are globally widespread.

Aluminum and zinc may be substituted for magnesium castings and wrought products, and alumina and silica can be substituted for magnesia in refractories.

World Production of Magnesium (Primary) In Short Tons

Year	Canada	France	India[3]	Italy	Japan	China	Norway	Yugoslavia	U.S.S.R.	Un. Kingdom[3]	United States	World Total[1]
1969	10,637	4,866		7,093	10,342	1,100	34,333		50,000	3,211	99,887	221,469
1970	10,353	5,083		8,356	11,395	1,100	38,959		55,000	3,038	112,007	242,253
1971	7,234	7,954		8,496	10,685	1,100	39,799		57,000	3,100	123,485	255,753
1972	5,924	7,550		8,335	12,004	1,100	40,149		60,000		120,823	255,960
1973	6,840	9,511		9,850	12,349	1,100	41,360		63,000		122,431	266,441
1974	6,535	7,199		8,191	9,836	1,100	43,866		66,000		N.A.	142,727
1975	4,217	8,303		6,993	9,412	1,100	42,259		66,000		N.A.	138,284
1976	6,715	8,857	33	9,740	12,335	5,500	42,778	—	69,000	3,000	119,957	274,882
1977	8,414	9,570	118	9,663	10,379	5,500	42,070	—	72,000	3,000	125,958	283,554
1978	9,159	9,370	25	10,688	12,252	6,600	43,155	500	77,000	3,000	149,463	318,187
1979	9,937	9,965	31	9,653	12,531	6,600	48,496	2,000	79,000	3,000	162,464	340,646
1980[2]	9,809	10,100	32	9,700	10,199	7,700	48,500	2,000	83,000	3,000	169,867	350,875
1981[1]	10,000	9,000		9,000	12,000	8,000	44,000	2,000	83,000		165,000	342,000
1982												

[1] Estimate. [2] Preliminary. [3] Secondary only. *Source: Bureau of Mines*

Salient Statistics of Magnesium in the United States In Short Tons

	Production							$	Domestic Consumption of Primary Magnesium				
		Secondary							Structural Products				
Year	Primary (Ingot)	New Scrap	Old Scrap	Total	Exports[2]	Imports for Consumption	Stocks Dec. 31[3]	Price per Pound[4]	Castings	Wrought	Total	Other Uses[5]	Total
1969	99,887	10,479	2,991	13,470	27,372	4,316	12,572	.35¼	10,450	13,110	23,560	71,572	95,132
1970	112,006	9,262	2,780	12,042	35,732	3,295	12,696	.35¼	10,997	12,250	23,247	70,248	93,195
1971	123,485	11,560	3,143	14,703	24,311	3,671	13,021	.36¼	8,376	10,717	19,093	73,073	92,166
1972	120,823	12,639	2,989	15,628	17,556	4,479	23,011	.37¼	10,762	12,947	23,709	79,982	103,691
1973	122,431	13,535	4,101	17,636	39,585	3,325	18,894	.37¼	12,137	12,965	25,102	90,672	115,774
1974	N.A.	9,155	5,719	14,874	46,398	5,305	23,000	41¼–.75	14,176	13,348	27,524	102,524	130,048
1975	120,203	18,090	9,783	27,873	32,591	7,903	19,664	.82	9,488	9,666	19,154	75,013	94,167
1976	119,957	19,024	11,529	30,553	13,444	14,907	17,295	.87–.92	7,051	10,241	17,292	87,161	104,453
1977	125,958	20,170	12,524	32,694	28,061	5,964	11,838	.96–.99	7,201	12,632	19,833	83,743	103,576
1978	149,463	22,135	14,093	36,228	41,807	6,668	12,583	.99–1.01	7,651	11,075	18,726	90,232	108,958
1979	162,464	23,340	13,882	37,222	54,280	4,754	13,901	1.01–1.09	7,460	11,562	19,022	89,822	108,844
1980[6]	169,867	22,907	17,554	40,461	56,761	3,757	14,393	1.07–1.25	5,847	11,620	17,467	78,321	95,788
1981[1]	165,000			43,000	34,836	6,898		1.25–1.34					100,000
1982													

[1] Estimate. [2] Metal & alloys in crude form. & scrap. [3] Producers' & consumers' stocks of primary magnesium. Gov't. agencies continue to hold quantities of primary magnesium. [4] Magnesium ingots (99.8%) f.o.b. Valasco, Texas. [5] Distributive or sacrificial purposes. [6] Preliminary. *Source: Bureau of Mines*

Manganese

Manganese is essential for the production of virtually all steels, its principal use. There are no satisfactory substitutes for this purpose. Manganese is used by the steel industry chiefly in the form of ferromanganese or silicomanganese. There was no domestic production of manganese ore, containing 35 percent or more manganese, in 1981. U.S. demand, for the most part, is met by imports of ore, alloys, and metal. It is augmented by the release of excesses from the Government stockpiles, and from industry stocks.

U.S. imports of manganese ore in 1981 were 8 percent smaller than in 1980, while imports of ferromanganese were 13 percent larger. Major sources of ore imports were: the Republic of South Africa, Gabon and Australia. Major sources of U.S. imports of ferromanganese (mostly high-carbon) in 1981 were: the Republic of South Africa, France, Canada and Mexico.

U.S. production of ferromanganese in 1981 was 7.5 percent lower than in 1980 and production of silicomanganese was down 5.2 percent.

High-carbon ferromanganese consumption was 3.2 percent higher in 1981 than in 1980, and medium and low-carbon ferromanganese consumption was up 13.4 percent. Silicomanganese use in the U.S. in 1981 was 4.4 percent higher than in 1980. Consumption of ore was 4.7 percent lower than in 1980.

Stocks of manganese ore in the U.S. at the end of 1981 were 2.6 percent smaller than a year earlier. Stocks of high-carbon ferromanganese were 5.5 percent below the level of a year earlier, while ending stocks of medium and low-carbon ferromanganese were 12 percent higher. December 31, 1981 U.S. stocks of silicomanganese held by consumers and producers were 1.5 percent above the year-earlier inventory.

As of November 30, 1981, the U.S. government stockpile consisted primarily of metallurgical ore, for which the goal was 2,700 short tons and the inventory 2,409 tons.

World Production of Manganese Ore In Thousands of Short Tons

Year	Hungary	Zaire (Congo)	Brazil	Chile	China	Gabon	Morocco	Ghana[3]	India	Japan	Australia	South Africa	USSR	Mexico	World Total
% Mn	30–33	30–57	38–50	36–40	20+	50–53	53–50	30–50	10–54	26–28	37–53	30–48+	35	35+	
1969		343.3	2,217	26.1	1,100	1,536	143.9	366.8	1,638	331.6	981	2,430	7,221		19,230
1970		382.4	2,071	29.5	1,100	1,602	123.9	446.8	1,820	298.1	828	2,954	7,541	301.9	20,084
1971		362.7	2,868	31.8	1,100	2,057	111.8	659.8	2,029	314.2	1,158	3,568	8,067	294.2	23,178
1972		407.3	2,268	17.7	1,100	2,135	105.9	549.3	1,810	287.4	1,284	3,606	8,619	325.9	22,948
1973		368.1	1,780	15.9	1,100	2,115	161.1	350.8	1,641	208.0	1,678	4,603	9,089	401.3	23,970
1974		317.2	1,972	31.6	1,100	2,275	192.7	275.9	1,656	183.6	1,678	5,231	8,989	444.4	24,751
1975		340.1	2,377	22.1	1,100	2,475	144.3	450.6	1,738	174.1	1,714	6,359	9,324	472.3	27,175
1976	138.0	200.8	1,870	26.1	1,100	2,444	129.3	343.8	2,022	156.2	2,375	6,010	9,520	499.6	27,113
1977	132.0	42.2	1,671	19.8	1,200	2,040	125.2	321.4	2,056	139.1	1,531	5,564	9,470	536.4	25,158
1978	126.0	—	2,113	25.6	1,400	1,831	139.1	347.9	1,785	114.8	1,377	4,759	9,984	576.7	24,843
1979	91.0	—	2,490	27.5	1,650	2,535	149.0	298.5	1,935	96.9	1,837	5,713	11,292	543.1	28,880
1980[1]	97.0	—	2,400	24.9	1,750	2,366	165.0	278.3	1,814	85.9	2,162	6,278	11,300	492.9	29,429
1981[2]			2,300		1,700	1,800			1,800		2,200	6,600	11,400		29,000

[1] Preliminary. [2] Estimated. [3] Dry weight. *Source: Bureau of Mines*

Salient Statistics of Manganese in the United States In Thousands of Short Tons (Gross Weight)

Year	Net Import Reliance as a % of Apparent Consumption	Manganese Ore (35% or More Mn): Consumption by Use: Alloys and Metal	Pig Iron Steel	Dry Cells, Misc.	General Imports	Consumption	Stocks, Dec. 31[2]	Ferromanganese: Domes. Production	Imports for Consumption	Exports	Consumption	Manganiferous Ore[3]: Production	Value Mil. $[4]	Spiegelesien: Stocks Dec. 31[3]	Consumption
1969					1,960	2,181	1,805	852.0	307.9	1.8	1,071	430.6	3.5	15.1	21.8
1970					1,735	2,364	1,768	835.5	290.9	21.7	1,001	368.3	2.8	10.4	20.3
1971					1,914	2,155	2,010	759.9	242.8	4.5	899	198.3	1.5	12.5	19.7
1972					1,620	2,331	1,795	800.7	348.5	6.8	968	147.2	1.0	13.2	19.6
1973					1,510	2,140	1,543	683.1	390.6	8.6	1,117	203.1	1.5	3.7	21.6
1974					1,225	1,880	1,841	544.4	421.2	7.0	1,115	272.9	2.3	3.1	18.1
1975	98	1,440.2	176.2	202.6	1,574	1,819	2,064	575.8	397.2	32.3	882	159.2	1.4	5.2	14.2
1976	98	1,263.5	143.8	193.6	1,317	1,601	2,256	482.7	537.4	6.8	896.8	256.6	2.3	8.1	8.4
1977	98	926.6	200.8	231.4	931	1,359	1,626	334.1	534.4	6.1	886.3	215.9	2.2	.1	6.8
1978	97	832.2	219.7	229.6	548	1,281	1,174	272.5	680.4	9.4	985.6	312.1	3.1	.1	4.0
1979	98	913.5	230.7	228.0	500	1,372	1,098	317.1	821.2	25.3	976.5	240.7	2.9	.1	3
1980[1]	98	727.5	131.5	211.7	698	1,071	1,030	189.5	605.7	11.7	789.1	173.9	2.4	—	.3
1981[5]	98				639	937	820	200	684.4	14.9	671.6			—	.1

[1] Preliminary. [2] Including bonded warehouses; excludes Gov't stocks; also excludes small tonnages of dealers' stocks. [3] 5 to 35% Mn. [4] Combined value for total Manganese ore & Manganiferous ores. [5] Estimate. *Source: Bureau of Mines*

Manganese Ore (35% or More Mn) Imported[2] into the U.S. In Thousands of Short Tons (Mn Content)

Year	Angola	Zaire	Brazil	Congo (Brazz.)	Guyana	Ghana	India	Mexico	Morocco	Gabon	Australia	Turkey	South Africa	Total	Value Mill. $
1972	17.2	142.0	192.8	16.8	—	22.1	12.4	32.7	13.9	236.8	40.3	—	65.7	793	34.3
1973	—	35.7	299.4	—	—	18.6	—	41.2	13.9	196.1	61.5	—	55.9	723	37.4
1974	—	25.3	222.0	—	—	4.5	—	16.4	27.5	150.1	114.0	—	32.9	593	45.1
1975	—	11.4	307.4	—	—	—	—	23.2	—	244.8	86.5	—	92.2	766	77.1
1976	—	2.9	161.1	13.3	—	—	—	18.5	18.7	256.4	117.4	—	61.0	649	73.6
1977	—	14.7	111.6	—	—	—	—	34.9	17.1	245.2	13.8	—	16.9	454	56.4
1978	—	13.2	52.1	9.5	—	—	—	18.4	14.5	127.0	32.6	—	11.0	278.2	33.6
1979	—	—	51.7	22.5	—	—	—	2.1	10.7	49.2	55.3	—	52.1	243.6	27.5
1980	—	—	33.6	—	—	—	—	18.6	5.3	79.9	106.0	—	86.4	329.8	46.4
1981[1]			38.9					25.8	.1	90.6	47.8		97.5	300.7	

[1] Preliminary. [2] Imported for consumption. *Source: Dept. of Commerce*

United States General Imports[1] of Manganese Ore In Thousands of Long Tons—Manganese Content

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1972	104	92	87	65	52	72	78	97	88	90	74	50	934
1973	106	72	52	101	99	58	85	72	51	127	41	51	916
1974	56	41	81	27	57	76	61	50	94	92	103	112	851
1975	79	40	108	138	116	84	77	88	51	112	43	98	1,033
1976	101	39	83	68	53	161	45	134	87	75	93	114	1,053
1977	71	53	29	48	121	119	62	87	110	49	21	64	884
1978	94	50	113	50	71	55	82	42	97	62	64	63	842
1979	62	50	60	57	85	122	61	34	85	53	105	76	850
1980	109	56	54	66	97	68	54	67	60	38	57	69	795
1981	22	76	55	70	111	78	68	55	72	51	67	49	775
1982	65												

[1] General imports of ore, concentrates manganiferous ore, manganese alloys & metals. *Source: Department of Commerce*

Average Price of Ferromanganese[1] (78% Mn-F.O.B. Plant) In Dollars Per Gross Ton—Carloads

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1972	190	190	190	190	190	190	190	190	190	190	190	190	190.00
1973	200	200	200	200	200	200	200	200	200	200	200	200	200.00
1974	200	200	200	270	270	294¾	315	333⅓	350	350	350	440	297.76
1975	440	440	440	440	440	440	440	440	440	440	440	440	440.00
1976	432½	432½	432½	432½	432½	432½	432½	432½	432½	432½	425	417½	430.63
1977	417½	417½	417½	399½	399½	399½	399½	399½	399½	399½	399½	399½	404.00
1978	399½	399½	399½	399½	422.17	425	425	425	425	425	425	425	416.26
1979	440	440	440	465	490	490	490	490	490	493.48	510	510	479.04
1980	510	510	510	510	510	510	510	510	510	510	510	510	510.00

[1] Domestic standard. *Source: American Metal Mkt.; Bureau of Labor Statistics* (1016–0111.04)

Production of Ferromanganese in U.S., & Materials Used in Its Manufacture

	Ferromanganese Produced				Materials Consumed (Short tons)			
		Manganese Contained			Manganese Ore			
Year	Short Tons	Per Cent	Short Tons	Silico-Manganese (Gr. Wt.) Sh. Tns.	Foreign	Domestic	Manganese Ore Used Per Ton of Ferromanganese & Silicomanganese	Ferromanganese Made
1971	759,896	78.6	597,205	165,000	1,820,408	7,033	1.9	2.4
1972	800,723	78.3	627,358	153,000	1,896,483	25,620	2.0	2.3
1973	683,075	78.8	538,119	184,000	1,648,806	25,912	1.9	2.4
1974	544,361	78.0	424,405	196,000	1,348,425	55,822	1.8	2.5
1975	575,809	78.9	454,309	143,000	1,389,300	48,011	1.9	2.4
1976	482,662	79.0	381,328	129,000	1,208,336	53,632	2.0	2.5
1977	334,134	78.8	263,136	120,000	889,296	35,769	1.9	2.6
1978	272,530	80.6	219,707	142,000	740,906	90,660	1.9	
1979	317,102	80.2	254,389	165,000	785,664	125,130	1.8	
1980[1]	189,472	79.7	150,982	188,000	691,250	34,877	1.9	
1981[1]	200,000							

[1] Preliminary. *Source: Bureau of Mines*

Margarine

Salient Statistics of Margarine in the United States In Million Pounds (Actual Weight)

				Domestic Disappearance[2]		Materials Used in Manufacture of Margarine								
Year	Stocks Jan. 1	Production	Exports & Shipments	Total	Per Person in lbs.	Coconut Oil	Cottonseed Oil	Soybean Oil	Peanut Oil	Corn Oil	Lard & Beef Fats	Safflower Oil	All Other Edible Oil	Total Primary & Secondary Fats & Oils
1972	57	2,364	13	2,339	11.1	6	65	1,461	—	194	138	20	2	1,885
1973	69	2,359	13	2,354	11.1	4	63	1,491	—	213	80	32	8	1,889
1974	61	2,398	15	2,380	11.1	9	58	1,457	—	188	167	16	9	1,905
1975	64	2,399	17	2,386	11.0	20	46	1,568	1	188	52	7	38	1,917
1976	60	2,628	20	2,601	11.9	4	51	1,671	38	218	44	10	58	2,091
1977	67	2,535	20	2,502	11.4	5	44	1,585	15	243	80	8	48	2,026
1978	80	2,520	31	2,499	11.2	7	42	1,593	—	211	74	10	27	1,997
1979	70	2,553	25	2,517	11.2	4	25	1,643	—	222	86	5	12	2,016
1980[1]	81	2,593	24	2,576	11.3		25	1,651	—	222	104			2,036
1981[1]	74													

[1] Preliminary. [2] Civilian & military. *Source: Bureau of Census*

United States Production of Margarine In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1972	207.9	194.9	202.0	181.5	186.5	186.3	164.4	194.7	197.3	203.8	216.1	228.7	2,364
1973	232.6	191.7	198.7	184.4	200.3	168.5	151.8	187.7	185.8	224.2	218.2	215.1	2,359
1974	248.1	205.7	213.4	194.8	202.9	174.4	192.0	163.2	182.2	229.5	203.9	187.6	2,398
1975	211.0	201.2	198.7	181.7	183.0	180.6	173.7	178.7	216.6	212.8	219.7	241.6	2,399
1976	265.1	259.6	225.8	198.8	190.5	199.8	197.4	195.1	202.8	215.6	233.2	246.0	2,630
1977	242.3	236.5	232.7	197.3	178.8	179.8	164.8	198.2	209.1	221.8	229.0	244.7	2,535
1978	219.8	224.6	243.0	186.8	183.7	194.6	166.0	200.6	207.6	222.2	220.6	250.0	2,520
1979[1]	233.1	214.8	242.9	186.8	197.5	193.0	188.3	199.0	205.9	225.8	224.6	241.5	2,553
1980[1]	235.8	228.7	231.6	184.5	200.5	214.6	192.1	186.9	213.2	221.9	218.4	264.6	2,593
1981[1]	235.5	214.4	231.6	196.3	182.1	214.3	184.7	192.5	223.3	220.9	232.6	248.2	2,576
1982[1]	221.5	237.9											

[1] Preliminary. *Source: Bureau of the Census*

Stocks[1] of Margarine in the United States In Millions of Pounds

Year	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1973	69.3	80.6	80.2	70.1	66.6	68.2	69.7	57.4	47.1	58.4	60.2	59.3
1974	61.2	55.3	63.0	74.4	75.2	80.3	77.8	70.8	69.0	71.8	74.1	70.0
1975	64.3	65.6	72.5	65.8	75.8	64.4	63.6	66.6	52.6	58.6	60.2	64.8
1976	60.1	67.0	82.1	101.1	70.2	71.4	70.8	73.6	80.0	72.4	72.2	69.8
1977	67.2	67.4	70.7	71.8	77.3	91.0	81.0	73.7	68.6	58.9	74.0	70.0
1978	79.9	61.8	70.2	59.3	72.3	63.4	68.8	67.8	60.3	66.0	69.9	58.9
1979[2]	69.5	66.8	82.1	67.5	77.3	75.2	78.3	68.7	77.1	72.7	81.6	64.9
1980[2]	80.5	71.6	80.0	73.2	69.5	62.5	74.7	78.3	60.7	66.1	80.0	71.4
1981[2]	74.2	62.2	68.3	76.8	66.1	74.2	87.0	79.8	87.7	75.4	62.5	64.2
1982[2]	61.0	62.2	66.8									

[1] Producers' and warehouse. [2] Preliminary. *Source: Bureau of the Census*

Average Wholesale Price of Margarine, Yellow, Quarters, F.O.B. Chicago[1] In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1973	21.0	23.1	25.0	25.5	25.9	27.5	27.9	41.7	34.1	36.9	37.0	37.0	30.2
1974	38.5	40.8	43.3	42.5	40.4	39.8	44.3	53.3	46.5	49.6	48.5	44.4	44.3
1975	41.8	41.5	39.3	41.5	39.5	39.3	39.2	38.1	36.0	34.3	33.5	31.3	37.9
1976[1]	31.0	31.0	31.0	31.0	30.7	30.0	31.8	30.0	32.0	32.0	33.0	33.0	31.4
1977	33.8	34.0	39.5	42.5	44.3	43.9	42.4	40.3	38.5	37.4	36.9	36.1	39.1
1978	36.6	36.7	41.0	43.6	42.0	40.6	37.8	37.3	41.6	41.3	40.1	39.6	39.8
1979	40.3	41.3	42.3	41.4	40.6	41.1	42.6	42.3	43.9	42.4	37.9	42.1	41.5
1980	39.8	38.3	39.0	35.6	34.8	36.1	40.3	40.0	40.3	39.3	40.3	40.2	38.7
1981	35.8	35.9	37.1	38.2	36.6	37.7	39.4	39.0	37.4	36.9	36.9	36.9	37.3
1982	37.0	37.6	38.3										

[1] Prices prior to 1976 are for WHITE (DOMESTIC VEGETABLE). *Source: Department of Agriculture*

Meats

World red meat supplies were expected to expand by about one-half of 1 percent in 1982, following small declines in both 1981 and 1980. Higher beef production in countries such as the United States and Mexico may about offset a significant decline in beef production in Argentina and smaller pork production in the United States and other countries. Generally weaker economies in many of the developed countries and relatively higher consumption of poultry meat were discouraging demand for red meats, resulting in weaker prices and less international trade. Imports of red meat by the major producing and/or trading countries were seen falling one-half of 1 percent in 1982.

Total red meat production for the U.S. in 1981 totaled 39.0 billion pounds, virtually unchanged from the 1980 level. Beef production of 22.4 billion pounds was up 3 percent from 1980; veal production of 436 million pounds was up 9 percent; pork production decreased 4 percent to 15.9 billion pounds. Lamb and mutton output increased 6 percent in 1981 to 338 million pounds.

Per capita red meat and poultry consumption on a retail-weight basis declined less than 1 percent in 1981. Pork production decreased 4 to 5 percent on a per capita basis as producers cut back production in reaction to reduced returns. Beef consumption increased above the year-earlier level for the first time since 1976, because of the reversal of the downward trend in the cattle cycle. A 2 percent decline in red meat consumption was mostly offset by increases in poultry consumption. Per capita supplies of meat and poultry in the U.S. were expected to remain below 1981 levels throughout the first half of 1982. Per capita consumption of beef and pork was expected to decline 1 to 3 percent and 9 to 10 percent, respectively, in the first half of 1982 vs. a year earlier.

The U.S. imports a significant amount of beef—mainly lower quality lean meat used for hamburgers, bologna, etc.—and exports smaller quantities of high value, high-quality meat—about 60 percent of which goes to Japan. Imports of meat under the U.S. Meat Import Law during 1981 amounted to 1.22 billion pounds, 15 percent below the year-earlier level. Prices for imported meat were relatively low for much of the year, causing a general lack of interest in the U.S. market by foreign suppliers. High interest rates and a general slowdown in the economy also helped slacken demand. Australia, the largest supplier of fresh, chilled, and frozen beef to the U.S. market, continued to experience reduced availabilities of beef for export as a result of declining cattle numbers.

Futures Market

Bullock cattle (export-type) futures began trading on May 17, 1982 on the Sydney Futures Exchange in Australia.

World Total Meat[1] Production In Millions of Metric Tons

Year	Argentina	Australia	Bel.-& Lux.	Canada	Czechoslovakia	Denmark	France	W. Germany	Japan	Italy	N. Zealand	Poland	Brazil	South Africa	Un. Kingdom	United States	U.S.S.R.
1972	2.6	2.4	.8	1.5	.7	.9	3.0	3.6	1.1	1.8	1.0	1.6	2.8	.8	2.1	16.8	10.0
1973	2.6	2.3	.9	1.5	.8	1.0	3.0	3.4	1.1	1.9	1.0	1.8	3.3	.7	2.1	15.8	9.9
1974	2.6	1.9		1.6			3.4	3.8	1.2	2.0		2.0	2.9		2.3	17.1	10.5
1975	2.8	2.4	.9	1.6	.8	1.0	3.4	3.8	1.3	1.7	1.0	2.1	3.0	.8	2.3	16.7	11.0
1976	3.2	2.7	.9	1.7	.8	1.0	3.5	3.9	1.4	1.9	1.2	2.4	3.1	.8	2.1	18.1	10.0
1977	3.3	2.0	.7	1.7	.9	1.0	3.4	3.9	1.5	2.0	1.1	2.3	3.4	.8	2.2	18.0	12.7
1978	3.5	2.8	.9	1.7	1.3	1.1	3.5	4.1	1.7	2.0	1.1	2.7	3.1	.8	2.2	17.5	13.3
1979	3.5	2.5	1.0	1.7	1.3	1.2	3.7	4.2	1.8	2.1	1.1	2.7	3.0	.9	2.2	17.1	13.2
1980	3.3	2.3	1.0	1.9	1.3	1.2	3.7	4.3	1.9	2.2	1.1	2.6	3.2	.9	2.3	17.7	12.6
1981[2]	3.3	2.1	1.0	1.9	1.3	1.2	3.7	4.3	1.9	2.2	1.1	2.1	3.3	.8	2.3	17.5	12.7
1982[3]	3.2	2.1	1.0	1.9	1.3	1.2	3.8	4.3	1.9	2.2	1.1	2.3	3.3	.8	2.3	17.5	12.8

[1] Production of beef & veal, mutton & lamb, goat meat, & pork. Horsemeat included from 1976. [2] Preliminary. [3] Forecast.
Source: Foreign Agricultural Service, U.S.D.A.

World Per Capita Consumption of Meat[1] (Total Red Meat) In Kilograms

Year	Argentina	Australia	Austria	Canada	Denmark	France	W. Germany	Ireland	N. Zealand	Poland	Switzerland	United Kingdom	United States	Uruguay	U.S.S.R.
1972	74	101	63	73	58	64	67	63	102	47	65	64	88	88	41
1973	79	91	63	71	53	63	65	60	104	49	66	59	81	85	40
1974	87	100	65	73	51	65	67	64	98	74	64	58	87	100	44
1975	99	109	68	73	54	66	67	67	103	73	64	58	83	100	45
1976	101.3	110.2	69.9	79.3	59.8	68.4	69.2	63.6	100.0	66.6	66.2	55.4	88.6	88.8	47.1
1977	101.2	110.1	71.1	76.8	58.7	69.4	69.6	62.4	107.2	65.5	69.5	58.1	87.2	96.8	51.0
1978	105.6	103.4	72.2	73.8	67.2	72.2	72.9	63.0	104.5	58.9	70.0	58.2	84.8	102.9	51.3
1979	103.0	88.3	73.4	71.1	66.9	74.2	74.3	64.9	100.2	57.8	70.2	59.9	81.7	81.5	51.7
1980[2]	103.3	83.8	74.3	73.6	71.0	75.1	75.7	65.9	98.1	56.6	76.8	58.2	83.9	94.0	49.8
1981[3]	103.2	77.7	74.9	72.4	72.1	74.5	75.7	65.9	97.9	48.2	77.9	56.1	80.0	95.1	47.9

[1] Summation of previous individual meat tables plus horse meat. [2] Preliminary. [3] Forecast.
Source: Foreign Agricultural Service, U.S.D.A.

MEATS

Total Red Meat Imports (Carcass Weight Equivalent[2]) of Importing Countries In Thousands of Metric Tons

Year	Belgium & Lux.	Canada	Czecho-slovakia	France	Rep. of Korea	W. Germany	Greece	Italy	Japan	Netherlands	Spain	Switzerland	Un. Kingdom	United States	U.S.S.R.
1969	83.0	185.5	88.2	339.0		303.7	98.6	364.7	268.3	94.9	120.7	48.7	1,518	1,023	39.5
1970	79.8	169.4	108.2	331.7		375.0	114.5	427.2	252.5	88.8	108.5	55.4	1,425	1,105	105.0
1971	82.5	122.4	65.1	324.0		422.1	123.9	473.2	312.1	75.5	47.8	53.7	1,431	1,065	133.6
1972	94.5	168.3	36.8	427.2		603.8	103.1	512.9	422.1	114.5	167.6	56.7	1,524	1,212	87.9
1973	106.0	163.5	85.3	468.4		605.1	126.7	660.4	592.9	118.5	128.2	56.3	1,312	1,176	94.4
1974	87.3	130.5	41.6	422.3	*1974–*	563.0	34.3	550.6	394.2	105.0	25.8	33.0	1,059	981.3	455.7
1975	111.7	151.6	12.3	479.1	*78*	586.0	50.3	588.7	569.8	131.2	71.7	24.7	1,064	1,020	454.1
1976	120.5	249.4	22.0	482.2	*(24)*	614.0	95.0	593.0	692.7	150.0	101.9	26.1	1,132	1,184	274.6
1977	121.2	194.3	21.4	556.2		627.0	110.9	612.9	649.0	175.3	59.2	26.0	1,280	1,100	496.2
1978	143.9	172.9	21.0	630.4		633.0	142.0	632.1	665.4	187.5	112.3	33.8	1,276	1,296	132.0
1979	99	140	21	541	108	648	140	684	610	149	124	25	1,245	1,348	469
1980	91	112	21	594	15	700	134	722	486	167	26	23	1,122	1,210	662
1981[1]	92	119	21	586	33	685	120	674	610	132	11	25	1,010	1,096	780
1982[3]	98	124	21	595	46	686	112	687	565	122	11	25	1,010	1,090	780
1983															

[1] Preliminary. [2] Excludes fat, offals & live animals. [3] Forecast. *Source: Foreign Agricultural Service, U.S.D.A.*

Total Red Meat Exports (Carcass Weight Equivalent[2]) of Principal Countries In Thousands of Metric Tons

Year	Argentina	Australia	Brazil	Canada	Denmark	France	Ireland	Mexico	Netherlands	N. Zealand	Poland	United States	U.S.S.R.	Uruguay	Yugoslavia
1969	909.5	694.7	128.5	65.3	608.3	155.0	223.3	58.3	395.5	734.7	195.2	88.3	122.5	128.9	130.9
1970	859.5	786.4	145.6	94.7	613.1	157.0	230.0	61.5	485.5	710.7	175.0	51.2	75.5	162.0	119.2
1971	556.8	926.6	187.6	102.7	683.7	212.3	256.5	55.9	511.2	731.2	189.3	59.8	60.7	102.1	120.7
1972	771.0	1,137	267.7	102.6	654.8	178.7	226.9	64.1	499.7	736.9	188.7	82.9	82.0	148.4	121.4
1973	600.2	1,132	225.5	112.5	647.0	200.5	227.8	48.2	555.6	723.8	216.2	140.9	98.5	111.8	106.1
1974	357.7	6,106	154.0	81.5	690.4	337.0	300.2	27.3	589.5	620.3	153.6	109.0	79.1	123.4	59.1
1975	329.5	943.0	156.2	78.2	700.2	374.8	359.7	17.6	610.9	708.2	161.7	164.0	63.5	124.1	86.8
1976	628.6	1,129	217.0	112.2	634.1	366.8	282.9	28.5	641.0	788.6	117.7	236.4	67.6	201.8	98.5
1977	669.6	1,335	240.0	112.1	695.6	312.2	363.8	34.1	697.2	790.9	131.8	236.0	49.2	134.6	88.0
1978	823.7	1,377	178.1	117.1	753.4	267.2	359.3	46.6	751.6	724.7	141.0	256.6	38.0	118.8	113.4
1979	728	1,306	111	133	832	306	342	7	785	783	155	211	33	84	82
1980	487	1,090	170	183	849	362	440	1	843	795	136	196	30	128	98
1981[1]	490	933	241	205	872	397	295	1	887	852	70	221	30	137	60
1982[3]	489	943	276	200	841	405	334	1	855	806	40	226	30	146	99
1983															

[1] Preliminary. [2] Excludes fat, offals & live animals. [3] Forecast. *Source: Foreign Agricultural Service, U.S.D.A.*

United States Exports of Livestock & Meat Products In Thousands of Metric Tons[5]

	Red Meats						Byproducts					Live Animals (1,000 Head)			
Year	Beef & Veal	Pork	Lamb, Mutton & Goat	Sausage, Bol. & Frank.	Other Meats[2]	Total	Variety Meats[3]	Saus. Casings (Animal)	Lard	Tallow & Greases	Cattle Parts[4]	Cattle & Calves	Sheep & Lambs	Hogs	Horses, Mules, Etc.
1969	25.7	145.1	1.4	4.7	13.0	190.0	239.8	11.9	261.9	1,908	29.9	39.2	106.2	18.6	11.5
1970	29.3	61.2	1.1	4.1	12.0	107.7	239.5	12.3	365.9	2,261	14.4	88.0	132.9	24.8	40.7
1971	42.0	65.3	1.3	4.0	12.4	125.0	277.5	12.3	282.3	2,616	28.4	93.0	213.8	17.3	14.5
1972	52.2	99.3	1.3	4.0	12.1	168.8	254.1	13.6	164.4	2,368	27.0	103.9	159.4	12.3	21.2
1973	79.1	160.7	1.7	5.6	15.8	263.0	281.9	14.8	113.3	2,319	31.2	272.6	204.3	16.8	71.5
1974[5]	23.0	42.9	1.2	2.4	9.0	78.4	134.2	5.6	73.2	1,218	37.8	204.4	290.7	15.8	66.4
1975	20.7	91.2	1.3	2.2	5.7	121.0	133.2	5.8	39.8	916.0	13.8	195.9	339.2	16.0	36.4
1976	36.6	137.5	1.4	2.5	7.7	185.6	172.2	6.9	81.9	1,076	10.5	204.5	244.5	10.8	37.8
1977	41.5	125.2	1.3	3.4	8.2	180.0	173.1	6.9	82.6	1,319	10.5	107.0	205.1	10.2	23.0
1978	55.3	100.2	1.4	3.7	6.8	167.3	185.8	7.1	54.2	1,228	19.4	122.2	141.8	12.7	43.9
1979	57.4	97.4	.6	3.0	4.7	163.0	168.9	7.2	43.5	1,286	21.6	66.2	125.4	13.4	29.1
1980	59.5	84.2	.6	3.3	7.4	155.0	200.4	7.6	41.9	1,516	17.5	65.6	123.5	16.3	25.7
1981[1]	74.7	100.9	1.0	3.8	7.5	187.9	210.0	7.2	67.9	1,487	14.9	87.8	220.9	24.1	66.9
1982															

[1] Preliminary. [2] Canned mainly. [3] Beef, Pork & other byproducts. [4] Excludes furskins. [5] Data prior to 1974 are in MILLIONS OF POUNDS. *Source: Foreign Agricultural Service, U.S.D.A.*

Production and Consumption of Red Meats in the United States *(Carcass Weight)*

Year	Beef			Veal			Lamb & Mutton			Pork (Excluding Lard)			All Meats		
		Consumption			Consumption			Consumption			Consumption			Consumption	
	Production	Total	Per Capita Lb.	Production	Total	Per Capita Lb.	Production	Total	Per Capita Lb.	Production	Total	Per Capita Lb.	Production	Total	Per Capita Lb.
	Mil. Lbs.	Mil. Lbs.		Mil. Lbs.	Mil. Lbs.		Mil. Lbs.	Mil. Lbs.		Mil. Lbs.	Mil. Lbs.		Mil. Lbs.	Mil. Lbs.	
1969	21,158	22,065	110.8	673	654	3.3	550	687	3.5	12,946	14,224	71.4	35,295	37,630	189.0
1970	21,685	22,926	113.6	588	581	2.9	551	657	3.3	13,429	14,661	72.6	36,220	38,825	192.3
1971	21,902	23,084	112.7	546	545	2.7	555	645	3.1	14,783	16,127	78.7	37,752	40,401	197.2
1972	22,419	23,962	115.5	459	465	2.2	543	684	3.3	13,631	14,712	70.9	37,020	39,823	191.9
1973	21,277	22,813	108.8	357	376	1.8	514	557	2.7	12,751	13,298	63.4	34,899	37,044	176.7
1974	23,138	24,489	115.7	486	493	2.3	465	483	2.3	13,805	14,493	68.5	37,894	39,958	188.8
1975	23,976	25,398	118.1	873	876	4.1	410	430	2.0	11,503	11,852	55.4	36,760	38,556	180.3
1976	25,969	27,549	127.6	853	854	4.0	371	396	1.8	12,415	12,668	58.7	39,608	41,467	192.1
1977	25,279	27,038	124.0	834	836	3.8	351	371	1.7	13,247	13,200	60.5	39,711	41,445	190.0
1978	24,242	25,999	117.9	632	646	2.9	309	342	1.6	13,393	13,293	60.3	38,576	40,280	182.7
1979	21,446	23,521	105.5	434	447	2.0	293	334	1.5	15,450	15,353	68.7	37,623	39,655	177.8
1980[1]	21,644	23,321	103.3	400	412	1.8	318	350	1.6	16,615	16,562	73.5	38,977	40,645	180.2
1981[2]	22,182	24,000	104.2	413	408	1.9	329	365	1.6	15,716	15,700	70.0	38,640	40,000	175.0
1982															

[1] Preliminary. [2] Estimate. *Source: Economic Research Service, U.S.D.A.*

U.S. Imports of Meats and Meat Preparations In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1969	65	88	198	149	134	139	163	188	174	165	100	122	1,685
1970	173	155	175	143	112	148	171	167	167	155	134	143	1,844
1971	133	112	151	141	133	170	155	166	223	110	102	188	1,789
1972	161	140	138	159	161	152	166	216	206	202	174	138	2,012
1973	165	148	133	149	166	143	153	209	159	207	184	156	1,972
1974	171	137	168	142	126	124	102	141	130	114	134	146	1,634
1975	179	131	145	125	111	135	148	149	157	135	168	112	1,694
1976	175	117	173	158	170	187	159	151	178	170	134	94	1,868
1977	131	150	143	147	147	135	147	158	167	117	87	212	1,741
1978	138	155	183	202	181	167	161	137	182	184	201	181	2,072
1979	201	184	214	201	190	214	168	141	142	143	188	193	2,178
1980	196	152	166	134	173	154	208	170	133	207	167	191	2,052
1981	171	167	131	155	140	153	162	168	180	167	120	118	1,832
1982	127												

Source: Dept. of Commerce

United States Imports of Livestock & Meat Products In Thousands of Metric Tons[2]

Year	Red Meats						Meat for Animal Food	Byproducts				Live Animals (1,000 Head)			
	Beef, Boneless	Canned Corned	Pork	Lamb	Mutton & Goat	Total		Variety Meats	Lard	Tallow & Greases	Meat Extract	Cattle & Calves	Sheep & Lambs	Hogs	Horses, Mules, Etc.
1969	984.6	94.7	315.5	43.9	54.2	1,653		5.6	—	12.7	.9	1,042	22.8	13.4	3.5
1970	1,083	88.5	347.6	43.5	39.5	1,810		9.8	—	8.4	1.2	1,168	11.7	67.8	3.7
1971	1,057	67.1	356.5	38.2	32.3	1,760		6.5	.5	6.1	1.2	991	5.5	77.5	3.7
1972	1,251	80.1	394.7	37.3	55.6	1,990	55.8	7.9	.3	5.7	.9	1,187	13.8	89.0	3.2
1973	1,292	69.9	398.5	27.3	13.0	1,954	41.9	7.2	—	15.1	1.5	1,039	9.5	87.6	3.3
1974[2]	469.0	30.4	164.2	8.1	1.8	733.6	8.3	2.7	.1	7.2	.3	568	.9	196.3	3.7
1975	533.4	24.0	148.4	11.2	.5	762.8	8.0	2.5	—	8.0	.2	389	3.5	29.8	9.2
1976	560.2	45.3	144.0	15.5	.4	838.4	3.7	2.4	—	4.8	.4	984	4.6	45.6	10.0
1977	541.0	34.1	135.3	9.5	.3	784.0	1.3	2.6	—	3.1	.3	1,133	8.5	43.0	11.3
1978	651.1	37.6	157.3	17.2	.2	931.7	1.8	2.5	.2	2.4	.5	1,253	11.2	202.4	19.0
1979	685.5	34.6	163.8	19.4	.4	978.9	1.9	4.7	—	1.1	.6	732	9.5	136.6	16.2
1980	622.6	34.5	196.6	15.0	—	923.1	3.5	4.6	—	2.2	.1	681	20.5	247.3	15.9
1981[1]	524.1	29.4	195.8	14.1	—	823.0	4.1	3.6	—	2.5	.4	659	6.9	145.7	14.2
1982															

[1] Preliminary. [2] Data prior to 1974 are in MILLIONS OF POUNDS. *Source: Foreign Agricultural Service, U.S.D.A.*

MEATS

U.S. Exports of Meat and Meat Preparations In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1969	29	35	57	54	62	45	46	40	47	62	51	43	571
1970	31	32	33	37	42	41	31	43	53	49	74	51	518
1971	39	41	49	35	46	43	39	51	48	39	43	69	547
1972	40	37	44	45	64	58	48	49	47	67	57	57	614
1973	48	52	81	75	74	66	49	57	53	72	62	70	759
1974	58	51	60	56	51	54	68	64	58	77	64	54	714
1975	57	67	75	65	79	64	70	77	73	76	79	82	864
1976	85	93	114	99	119	109	90	112	110	130	117	128	1,305
1977	100	100	103	113	110	103	112	110	125	106	109	124	1,315
1978	109	101	115	108	108	99	93	119	131	124	119	111	1,338
1979	102	95	117	99	100	124	103	109	119	135	119	155	1,378
1980	101	108	144	132	139	164	145	129	136	165	144	154	1,663
1981	143	141	169	248	189	180	128	144	123	174	154	154	1,847
1982	129												

Source: Dept. of Commerce

Average Wholesale Prices of Meats In Cents Per Pound

Year	Composite Retail Price				Steer Beef Carcass, Choice, Centr. U.S.	Fresh Beef, Steer Carcasses Choice, E. Coast	Lamb Carcasses Choice & Prim. (35-45 Lb.) East Coast[5]	Pork Loins, (8-14 lbs.) N.Y.	Hams[2] Fancy Skinned, Smoked	Picnics[6] (Smoked) 4-8 Lb.[1]	Live Broilers Georgia
	of Beef (Choice)	of Pork[4]	of Veal	of Lamb (Choice)							
1969	98.6	73.6	110.8	100.7	47.73	49.2	60.47	57.47	58.0	47.64	14.0
1970	101.7	77.4	124.3	105.5	47.33	49.0	59.13	56.86	54.2	48.40	12.3
1971	108.1	69.8	135.8	109.7	52.67	54.7	60.71	49.85	53.4	32.31	12.8
1972	118.7	82.7	153.9	113.8	55.63	57.6	65.21	64.46	62.6	40.47	13.1
1973	142.1	109.2	181.7	134.3	67.62	69.6	74.30	81.91	81.0	55.51	23.9
1974	146.3	107.8	194.1	146.4	73.12	69.1	83.33	78.56	67.8	47.95	21.1
1975	154.8	134.6	181.1	167.6	73.18	75.4	95.07	99.28	88.2	60.31	26.9
1976	148.2	134.0	173.3	185.6	61.00	64.4	102.67	97.68	85.5	61.35	24.0
1977	148.4	125.4	175.3	186.8	62.69	66.2	108.73	95.25	86.5	57.03	23.7
1978	181.9	143.6	209.5	219.6	80.43	83.9	127.20	109.15	90.0		26.0
1979	226.3	144.1	282.3	245.7	101.62	101.1	134.50	107.65	80.6		26.0
1980[3]	237.6	139.5	309.5	252.7	104.44	104.4	135.02	101.14	81.3		27.0
1981[3]	238.7	152.4	314.5	252.4	99.90	99.8	126.49	96.56	77.6		27.0
1982											

[1] At NY. [2] Composite. [3] Preliminary. [4] Sold as retail cuts (ham, bacon, loin, etc.). [5] Prior to 1972—CHICAGO. [6] Prior to 1971 prices are for BACON. *Sources: Bureau of Labor Statistics; Department of Agriculture*

Average Wholesale Price of Steer Beef Carcass, Choice[1], at Midwest Markets[2] In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1969	45.85	45.02	47.00	48.63	53.19	53.94	50.68	48.34	46.36	44.58	44.27	44.95	47.73
1970	46.89	46.74	49.34	48.78	47.18	48.02	50.26	48.86	47.38	45.91	44.86	43.79	47.33
1971	48.60	51.86	51.45	52.62	53.96	52.62	52.54	53.99	52.75	51.60	54.08	55.92	52.67
1972	57.52	57.58	54.92	53.72	56.45	59.36	58.69	54.56	53.36	52.95	51.26	57.20	55.63
1973	62.85	66.85	69.38	69.84	69.15	70.92	71.90	—	69.69	65.56	61.97	65.00	67.62
1974	75.56	75.78	67.62	65.84	66.13	62.18	84.92	77.95	79.66	75.62	72.96	73.25	73.12
1975	61.36	58.41	59.50	70.20	80.60	85.76	82.82	77.95	79.66	75.62	72.98	73.25	73.18
1976	66.68	62.22	56.97	65.85	63.56	62.45	58.20	57.05	57.24	58.36	60.85	62.52	61.00
1977	60.04	58.92	57.12	60.54	64.44	62.62	63.65	62.49	63.04	65.87	65.47	68.10	62.69
1978	68.74	71.08	74.88	81.43	88.48	85.95	84.81	79.94	81.96	82.14	80.98	84.75	80.43
1979	93.57	97.47	104.59	108.61	108.64	103.56	99.85	94.13	101.91	98.32	103.22	105.53	101.62
1980	102.26	103.70	103.15	99.41	102.00	105.18	110.11	111.96	107.97	105.49	101.44	100.57	104.40
1981	99.80	96.80	94.32	99.68	103.32	106.52	107.3	103.90	102.96	96.02	94.56	93.70	99.00
1982	97.40	101.20											
1983													

[1] 500–600 pounds. [2] Prior to Oct. 1975 prices are at CHICAGO. *Source: Economic Research Service, U.S.D.A.*

Production[2] (Commercial Slaughter[4]) of All Meats[1] in the U.S. In Millions of Pounds—Carcass Weight

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1969	2,965	2,628	2,765	2,788	2,692	2,602	2,705	2,650	2,917	3,170	2,617	2,872	33,369
1970	2,891	2,535	2,820	2,919	2,738	2,770	2,770	2,731	3,031	3,196	2,951	3,221	34,574
1971	3,076	2,663	3,233	3,074	2,940	3,104	2,879	2,966	3,116	3,027	3,072	3,062	36,209
1972	2,861	2,744	3,193	2,859	3,097	2,996	2,581	3,082	2,968	3,228	3,130	2,893	35,632
1973[4]	3,176	2,722	2,979	2,579	3,051	2,799	2,651	2,704	2,635	3,225	3,079	2,894	34,495
1974	3,255	2,661	3,098	3,149	3,266	2,945	3,026	3,132	3,074	3,471	3,155	3,088	37,323
1975	3,315	2,880	2,959	3,089	2,873	2,832	2,842	2,860	3,088	3,339	2,978	3,159	36,213
1976	3,267	2,907	3,515	3,109	2,928	3,150	3,048	3,350	3,467	3,497	3,453	3,367	39,060
1977	3,237	3,084	3,551	3,195	3,122	3,298	2,925	3,404	3,354	3,345	3,416	3,241	39,172
1978	3,215	3,045	3,342	3,079	3,269	3,081	2,883	3,274	3,139	3,355	3,345	3,094	38,119
1979[3]	3,281	2,756	3,090	2,879	3,130	2,990	2,958	3,329	2,876	3,556	3,306	3,074	37,225
1980[3]	3,393	3,050	3,099	3,315	3,311	3,089	3,073	3,016	3,221	3,577	3,097	3,349	38,590
1981[3]	3,417	3,014	3,383	3,296	3,069	3,113	3,038	3,041	3,243	3,428	3,184	3,416	38,644
1982[3]	3,152	2,894	3,296										

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[1] Except for pork production & lard. [2] Represents the total dressed carcass weight of livestock slaughtered under Federal inspection, exclusive of meats from condemned animals. [3] Preliminary. [4] Prior to 1973 data are for INSPECTED SLAUGHTER. *Source: Agricultural Marketing Service, U.S.D.A.*

Cold Storage Holdings of All[1] Meats in the United States, at End of Month In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1969	595.3	601.0	616.5	677.9	634.2	555.5	512.6	513.1	549.9	612.2	635.2	637.3
1970	660.1	705.9	744.0	812.9	815.8	729.6	673.1	605.7	588.1	645.8	714.6	759.3
1971	769.8	745.2	789.1	866.1	897.4	890.8	831.7	771.6	775.3	768.1	756.0	795.8
1972	745.6	707.1	732.4	819.0	797.5	710.1	638.1	598.8	594.0	641.7	702.0	670.3
1973	681.9	661.5	687.0	706.7	697.6	675.3	588.5	505.4	525.0	643.3	770.0	829.7
1974	868.9	875.4	946.4	995.9	1,011.3	913.8	796.1	725.1	692.0	715.4	754.2	803.2
1975	809.4	793.9	787.4	801.1	725.6	654.0	578.2	518.4	517.5	571.3	667.6	675.2
1976	643.4	652.8	703.1	724.3	740.9	698.1	645.4	597.6	637.7	687.8	725.9	733.3
1977	745.4	759.6	776.4	823.0	802.4	723.4	629.4	568.6	579.0	532.1	565.2	566.6
1978	559.1	571.6	658.4	753.0	759.8	720.6	644.9	581.0	598.1	639.0	715.4	723.6
1979	728.4	710.9	762.5	783.4	797.0	755.0	685.6	580.7	549.1	604.5	656.9	706.2
1980	735.3	712.6	695.4	715.5	706.5	641.8	578.6	514.3	510.0	584.2	678.6	749.6
1981[2]	790.3	782.9	775.9	817.2	795.2	716.6	628.2	538.6	508.6	546.8	552.2	580.0
1982[2]	553.4	524.2	535.8									
1983												

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[1] Includes beef and veal, mutton and lamb, pork and products, rendered pork fat, and miscellaneous meats. Excludes lard. [2] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

Stocks of Frozen Beef[1] in U.S. Cold Storage & Meat Packing Establishments In Millions of Pounds

Year	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1969	296.5	281.2	271.0	274.6	266.6	247.0	230.9	238.9	266.9	304.0	334.5	333.2
1970	352.9	368.3	374.3	379.6	369.1	353.1	319.3	310.3	289.1	286.9	300.7	317.9
1971	338.4	325.7	308.4	302.1	290.3	285.1	296.7	312.2	333.2	351.1	347.2	326.9
1972	366.0	338.5	308.6	286.0	283.0	276.6	255.7	260.2	283.6	297.7	326.7	351.4
1973	367.1	382.8	368.9	359.3	360.1	335.6	322.4	298.1	253.6	244.5	315.3	392.6
1974	447.8	470.5	456.1	477.1	467.4	461.3	438.0	397.5	375.2	346.8	350.4	359.8
1975	401.9	407.1	385.9	384.6	349.0	308.6	288.1	269.0	258.2	254.4	272.4	320.0
1976	349.8	342.8	355.7	390.6	390.8	399.7	395.3	382.6	362.8	382.4	405.0	429.6
1977	453.5	474.6	475.4	472.9	472.0	447.4	412.6	374.0	350.1	345.8	301.1	291.5
1978	315.6	313.1	318.4	357.2	376.0	388.2	372.3	336.5	315.7	332.2	348.4	386.2
1979	405.4	423.7	405.0	427.4	410.1	411.9	395.7	369.6	324.2	296.7	308.2	321.9
1980	350.3	367.3	357.6	335.1	296.6	277.9	256.5	242.6	228.6	219.7	243.8	279.0
1981[2]	328.2	361.3	347.8	341.5	339.8	329.1	297.8	272.9	245.5	235.4	245.3	233.6
1982[2]	258.4	249.1	223.3	212.6								
1983												

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[1] Includes frozen beef, cured beef, and beef in process of cure. [2] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

Mercury

U.S. mine production of mercury in 1981 was 9 percent below that of 1980, and secondary production (including GSA releases) was 33 percent below the 1980 level, according to the U.S. Bureau of Mines.

Consumption of mercury in the U.S. in 1981 was slightly larger than in the year earlier. Principal uses were: electrical apparatus—56 percent; mildew-proofing paint—14 percent; electrolytic production of chlorine and caustic soda—13 percent; industrial and control instruments—10 percent; others—7 percent. Batteries accounted for the largest single use of mercury.

U.S. imports of mercury for consumption, in 1981, were 32% above the 1980 level. Japan and Spain continued as the major suppliers. Net import reliance increased to about 39 percent of apparent U.S. consumption in 1981 from an estimated 26 percent in 1980.

Stocks of mercury held by consumers and dealers in the U.S. at the end of 1981 were 28 percent smaller than on December 31, 1980, but producer stocks were 6 percent higher than at the end of 1980. As of November 30, 1981, the U.S. stockpile held 191,391 flasks (of 76 lbs. each) of mercury, compared with a goal of 10,500 flasks. In early November, 1981 the General Services Administration (GSA) announced its plans to auction 1,500 flasks of mercury per month from the National Defense Stockpile. The GSA continued its monthly auctions of surplus mercury obtained from the U.S. Department of Energy (DOE) through October 1981 when they were suspended, selling about 10,000 flasks in 1981.

Environmental pollution control factors were expected to continue to dampen growth in mercury consumption, especially in paints, agriculture, pharmaceuticals, and the chlor-alkali industry. There are few satisfactory substitutes for mercury in electrical apparatus and industrial and control instruments—the principal uses. However, substitutes include nickel-cadmium or other battery systems for electrical apparatus, and solid state devices for industrial and control instruments.

World Production of Mercury In Flasks of 34.5 Kilograms (76 Pounds)

Year	Yugoslavia	Peru	Philippines	Chile	China[1]	Canada	Czechoslovakia	Turkey	Italy	Japan	Mexico	Spain	Algeria	United States	USSR[1]	World Total
1969	14,330	3,592	3,478	286	20,000	21,200		6,544	48,733	5,613	22,500	64,862		29,640	47,000	289,267
1970	15,461	3,196	4,648	388	20,000	24,400		8,592	44,470	5,170	30,256	45,552		27,296	48,000	284,014
1971	16,593	3,462	5,020	502	26,000	18,500		10,460	42,613	5,564	35,390	50,831		17,883	50,000	300,634
1972	16,419	4,550	3,341	640	26,000	14,637		7,963	41,801	5,019	22,510	53,994		7,349	50,000	278,968
1973	15,606	3,581	2,169	798	26,000	12,500		7,861	33,504	3,742	21,646	62,069		2,227	52,999	270,014
1974	15,838	3,252	812	921	26,000	14,000	5,541	8,833	25,991	1,409	25,933	54,354	14,000	2,189	54,000	257.477
1975	16,941	1,530	244	97	26,000	12,000	5,900	5,421	31,677	—	14,214	44,010	28,000	7,366	55,000	252,329
1976	12,503	—	—	13	18,000	—	5,540	4,899	22,278	—	15,026	42,729	30,915	23,133	56,000	234,614
1977	3,133	—	—	20	20,000	—	5,309	4,686	406	—	9,660	26,851	30,429	28,244	58,000	190,736
1978	—			—	20,000		5,686	5,020	87		2,205	29,588	30,603	24,189	60,000	181,434
1979	—			—	20,000		4,960	4,786	—		2,000	33,275	30,000	29,519	61,000	190,039
1980[2]	—			—	20,000		4,612	5,000	—		1,500	33,000	30,000	30,657	62,000	191,069
1981[1]											1,500	33,000	30,000	28,000	62,000	190,400
1982																

[1] Estimate. [2] Preliminary. *Source: Bureau of Mines*

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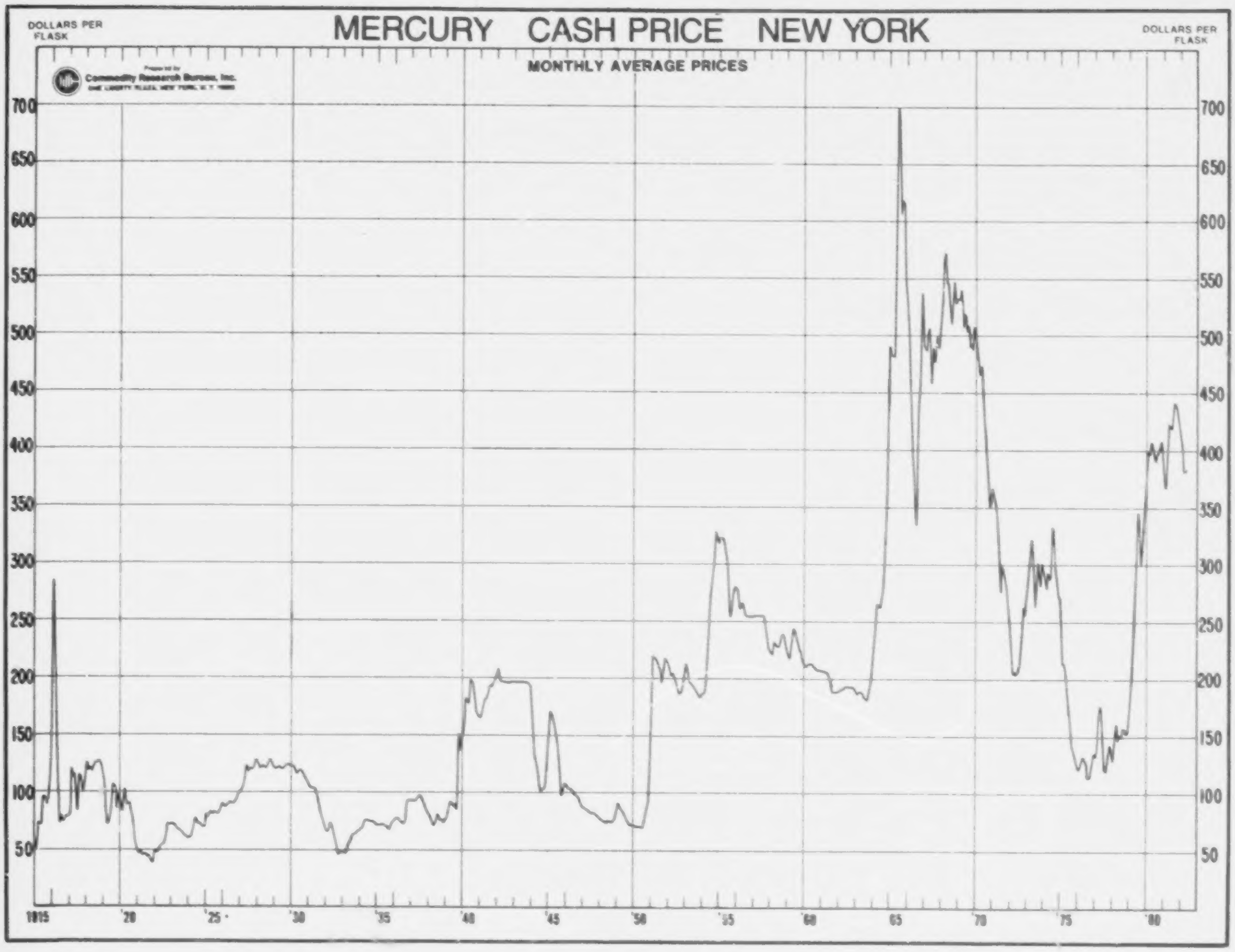

Average Price of Mercury in New York In Dollars Per Flask of 76 Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.	Average
1969	530.86	539.79	529.62	506.52	518.81	503.24	508.48	489.29	491.43	486.83	507.94	505.95	509.90
1970	489.09	469.33	464.52	472.54	455.15	423.18	418.18	381.67	366.90	350.45	360.56	366.14	418.14
1971	357.25	353.21	340.43	323.09	301.00	275.68	299.76	295.00	288.09	280.79	269.00	252.10	302.95
1972	222.14	216.00	205.35	203.05	170.95	205.86	213.00	239.04	262.50	256.30	259.00	267.80	226.76
1973	284.59	303.10	320.13	305.81	273.49	262.50	273.95	301.83	280.79	293.45	301.83	293.83	291.27
1974	282.84	279.05	292.07	285.82	288.32	333.35	328.56	296.09	290.00	281.52	270.50	270.50	291.55
1975	223.05	212.50	212.50	202.84	170.00	170.00	149.09	141.00	137.50	131.91	130.00	121.50	166.82
1976	120.55	126.63	127.87	131.64	125.70	113.50	113.50	113.77	120.60	132.17	132.08	132.00	124.25
1977	137.02	168.03	173.50	150.38	135.79	120.68	122.26	123.54	137.57	142.76	135.80	129.12	139.70
1978	143.29	160.58	147.57	147.08	151.98	149.55	157.11	157.00	151.67	152.34	154.55	170.55	153.60
1979	190.80	202.63	224.32	255.00	300.55	343.90	322.34	300.33	313.16	324.13	328.63	362.08	288.99
1980	383.75	399.90	420.00	406.81	398.33	389.57	397.11	397.26	402.62	407.83	404.56	376.19	396.72
1981	366.00	386.79	411.18	423.41	418.50	423.07	433.75	441.14	436.55	425.91	421.84	413.07	416.77
1982	405.00	380.92	390.76	384.32									
1983													

Source: American Metal Market

MERCURY

Average Price of Mercury at London In U.S. Dollars Per Flask

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1969	532.3	533.3	533.3	533.7	532.2	532.9	533.1	531.9	524.5	526.3	560.1	563.4	536.41
1970	494.3	460.1	464.0	464.0	439.3	414.3	413.0	370.3	355.7	346.2	359.4	358.5	411.45
1971	359.8	359.6	335.8	316.6	285.9	251.1	278.7	255.4	256.0	244.2	233.9	210.2	282.46
1972	208.1	198.8	173.4	141.4	153.3	177.4	191.1	222.5	241.1	237.8	242.8	248.5	203.01
1973	260.7	289.4	303.9	283.0	257.8	243.7	263.4	274.8	266.2	270.7	286.6	282.3	273.54
1974	266.7	269.5	270.3	268.0	274.4	315.6	304.5	274.7	272.2	259.6	245.5	194.4	267.94
1975	183.75	194.69	170.00	141.75	137.06	127.50	114.69	114.67	111.69	103.07	84.08	78.28	130.10
1976	81.38	94.51	99.06	99.63	82.00	82.50	83.25	83.25	87.75	100.23	101.67	108.38	91.07
1977	145.79	165.64	184.44	159.32	138.28	122.79	118.58	122.82	130.63	136.34	126.43	137.32	140.70
1978	131.21	130.50	130.10	132.50	131.25	124.83	127.71	128.00	127.29	126.17	137.38	151.86	131.57
1979	196.00	218.49	241.50	262.29	301.86	343.89	301.00	301.63	310.76	324.46	333.34	365.63	291.73
1980	390.06	393.33	396.56	4[illegible].39	394.17	386.88	399.33	408.11	415.00	414.72	399.31	374.94	398.07

Source: U.S. Bureau of Mines

Salient Statistics of Mercury in the United States In Flasks (76 Pounds Each)

Year	Net Import Reliance as a % of Apparent Consumption	Ore Treated (1,000 Short Tons)	Mercury Produced[2]		Production		Stocks, Dec. 31			Exports	U.S. Imports (For Consumption) From:					
			Flasks	Pounds per Ton of Ore	Mine	Secondary	Producers	Consumers & Dealers	Total		Total	Canada	Italy	Mexico	Spain	Japan
1969		432.6	28,552	5.0	29,640	13,650	2,920	19,772	22,692	507	31,924	15,546	5,041	7,398	2,602	
1970		424.5	26,795	4.8	27,296	8,051	3,861	12,693	16,554	4,653	21,972	17,872	1,101	920	2,002	
1971		265.8	17,444	5.0	17,883	16,666	5,373	11,489	16,862	7,232	28,449	18,198	250	4,786	2,152	
1972		82.6	7,004	6.5	7,349	12,651	4,171	11,537	15,708	400	28,834	13,803	—	5,529	1,829	
1973		26.3	2,101	6.1	2,227	10,329	3,927	14,019	17,946	342	46,026	17,440	1,005	2,775	7,286	
1974		28.9	1,680	4.4	2,189	8,293	4,100	15,777	19,877	466	52,180	16,972	845	10,597	6,293	
1975	69	76.8	6,905	6.8	7,366	8,038	4,858	20,691	25,549	339	43,865	12,891	7,340	2,213	4,575	
1976	62	185.1	23,042	9.5	23,133	3,363	9,494	22,240	31,734	501	44,415	2,853	13,172	1,719	4,824	
1977	44	216.6	28,244	9.9	28,244	6,566	11,275	22,903	34,178	852	28,750	1,708	671	4,668	8,790	
1978	60	256.2	24,144	7.2	24,163	9,262	16,600	22,149	38,749	N.A.	41,693	895	5,913	813	13,923	4,428
1979	59	242.6	29,499	9.2	29,519	15,587	9,181	18,401	27,582	N.A.	26,448	3,943	4,429	403	8,507	7,960
1980[1]	26	356.0	30,623	6.5	30,657	16,806	11,095	21,974	33,069	N.A.	9,416	843	—	989	3,352	3,813
1981[3]	39				27,933	11,285	11,783	15,862	27,645		12,405	112	—	104	4,897	2,372
1982																

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[1] Preliminary. [2] Excludes mercury produced from placer operation & from clean-up activity at furnaces & other plants. [3] Estimate. *Source: Bureau of Mines*

Mercury Consumed in the United States In Flasks

Year	Batteries	Chlorine & Rust. Prep.	Catalysts	Dental Prep.	Electrical[3] Lighting	Electrolytic Prep.	General Lab. Use	Industrial & Control Instrum.	Paint		Wiring Devices & Switches	Meas. & Control Devices	Other	Grand Total
									Anti-Fouling	Mildew Proofing				
1969			2,958	2,880	18,490	20,720	1,936	6,655	244	9,486			9,134	77,372
1970			2,238	2,286	15,952	15,011	1,806	4,832	198	10,149			5,858	61,503
1971			1,012	2,361	16,885	12,154	1,798	4,871	414	8,191			2,407	52,257
1972			800	2,983	15,553	11,519	594	6,541	32	8,190			4,258	52,907
1973			673	2,679	18,000	13,070	658	7,155	32	7,571			1,913	54,283
1974			1,298	3,024	19,678	16,897	476	6,202	6	6,807			2,452	59,479
1975			838	2,340	16,971	15,222	335	4,598	—	6,928			1,750	50,838
1976			1,264	1,990	27,498	16,054	595	5,067	—	7,845			2,909	64,870
1977			1,545	1,230	29,180	10,744	406	5,221	—	8,365			2,589	61,259
1978	13,825	11,166	N.A.	512	10,897	11,166	420	4,078		8,956	3,178	3,489	11,763	59,393
1979	7,988	12,180	548	793	7,719	12,180	410	3,602		9,979	3,213	3,603		62,205
1980[1]	27,829	9,470	265	947	1,036	9,470	363	3,049		8,621	3,062	3,049		58,983
1981[2]	27,729	7,245		1,745						7,390				

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[1] Preliminary. [2] Estimate. [3] Data prior to 1980 are for Electrical Apparatus. *Source: Bureau of Mines*

Milk

Milk production in the U.S. in 1981 totaled a record 132.6 billion pounds, a gain of 4.1 billion pounds (3.2 percent) from 1980. A gain in output per cow as well as an increase in cow numbers accounted for the increase. Milk output per cow expanded an average of 2.2 percent in 1981, compared with the previous year's increase of 3.5 percent. Several factors may have accounted for the somewhat slower gains in output per cow. On the plus side was the fact that the large number of replacement heifers that came into production during 1979 and 1980 were at or approaching their full productivity in 1981. In addition, good-to-excellent weather and pasture conditions, except for the Southeast, promoted higher output per cow. Meanwhile, limiting gains, were the very large number of replacements that probably entered the herd in 1981. Also, despite favorable milk-fed price relationships, concentrate feeding, at 15.5 pounds per cow per day, was only slightly higher than a year-earlier.

The annual average number of milk cows on farms increased 1 percent in 1981, following a gain of 0.6 percent in 1980. This was the first consecutive 2-year expansion in average cow numbers since 1943–44. The U.S. dairy herd in general had been growing from month-earlier levels since June 1979 and continued to do so in 1981—counter to the pattern of declines that had existed since 1954. The increase in cow numbers was predominantly because of a large number of replacements entering the herd. The relatively high number of dairy calves retained since late 1977 has reflected farmers' expectations of future income-earning potential.

Milk cows on farms on January 1, 1982, numbered 11 million, up 99,000 from July 1, 19[illegible] and 138,000 (1.3 percent) more than a year earlier. The 4.53 million dairy heifers (500 pounds and over) held for herd replacement also increased from year-ago levels, but were below the July 1, 1981, inventory. However, the heifer stocks were the largest for the beginning of a year since 1965. There were 41.2 heifers per 100 cows in the U.S. dairy herd, the highest ratio on record for that date.

Milk cow numbers were expected to remain above year-earlier levels for all of 1982 and, for the year, may average about 1 percent above 1981. Output per cow and milk production gains were expected throughout 1982, with total output expected to increase 1.5 to 3.5 percent from 1981.

During 1981, civilian per capita domestic disappearance (including USDA donations) decreased by 2 pounds from 1980 to 540 pounds on a milk-equivalent, fat solids basis. Even through commercial sales of dairy products increased from a year earlier, the larger population, along with slightly reduced USDA donations, brought about the decline in consumption. Estimated 1981 per capita use of milkfat of 19.8 pounds was also down from 1980 because of lower whole milk and butter use.

Sales of lowfat and skim milk products increased 3 percent during 1981 and partially offset the 3.5-percent decline in whole milk items. This continues the long-term trend towards milk products with less butterfat. Sales of all fluid milk items in 1981 dropped 0.8 percent from 1980.

Federal Milk Market Orders

During 1981, an average of 119,200 producers delivered nearly 88 billion pounds of milk to handlers regulated under the 49 Federal milk marketing orders in effect in 1981. Daily deliveries per producer averaged 2,017 pounds in 1981, an increase of 3.3 percent from 1980.

Producer milk sold for fluid use (Class I milk) totaled 40.7 billion pounds, 0.4 percent less than in 1980. Combined with the increase in producer deliveries, this resulted in the Class I utilization percentage declining to 46 percent from the previous year's 48.8 percent. Manufactured products use (Class II and III) accounted for 54 percent.

Class I prices are the minimums that handlers must pay for Grade A milk used as a fluid beverage under a federal milk marketing order program. Class I minimums are set at a fixed premium in each market order to the Grade B (manufacturing use only) price paid in the Minnesota-Wisconsin area as reported by the USDA (the M-W price). In each federal order, the total revenue from fluid sales at the higher Class I price and sales of surplus Grade A milk at the lower Class II and III price are pooled and distributed back to producers as a blend price. Producers in each order are paid the same average price according to each market order's Class I, II and III utilization.

The producer blend price in 1981 averaged $13.63 per cwt., 3.5 percent butterfat (BF), up from $12.86 in 1980 because of a 5.8 percent increase in the M-W price even though there was no increase in the support price during 1981. The minimum Class I price averaged $14.70 per cwt., 3.5 percent BF, in 1981, $0.93 per cwt. above the 1980 average.

U.S. Government Price Support Program

The dairy price support program is achieved by CCC willingness to purchase butter, cheese, and nonfat dry milk at prices which relate to the support price for milk. The 1981 Food and Agriculture Act kept the minimum support price at $13.10 per cwt. (3.67 percent BF), until the end of the 1981/82 marketing year. For 1982/83 the Act sets minimum support at $13.25 per cwt. which is less than 75 percent of parity. However, if the net cost of the dairy price support program is projected at less than $1 billion, the price of milk will be supported at not less than 70 percent of parity. In addition, if net support purchases are projected to be less than 4 billion pounds, milk equivalent, for 1982/83, the minimum support will be not less than 75 percent of parity. In 1982/83, the USDA projects that both the net cost and net purchases will above these thresholds. If these projections are correct, then the support would be the minimum $13.25 per cwt.

MILK

World Fluid Milk Production (Cow's Milk) In Millions of Metric Tons[3]

Year	Australia	Brazil	Canada	Czechoslovakia	Denmark	Finland	W. Germany	U.S.S.R.	India	Netherlands	New Zealand	France	Poland	Switzerland	United Kingdom	United States
1969	16.6	16.3	18.7	10.5	10.8	7.7	49.0	178.4		17.6	13.9	61.0	*'67–'71*	7.0	26.8	116.3
1970	17.0	17.0	18.3	10.6	10.2	7.2	48.2	181.4		18.2	13.0	60.1	*(14.8*	6.9	27.3	117.0
1971	16.1	16.3	17.8	10.9	10.0	7.2	46.7	183.4		18.5	13.1	60.9	*M.T.)*	7.0	28.0	118.5
1972[3]	7.3	7.5	8.0	5.0	4.8	3.3	21.5	83.2		9.0	6.2	29.9	15.9	3.2	13.4	54.3
1973	7.3	7.2	7.7	5.3	4.7	3.2	21.3	88.3		9.4	6.0	30.4	16.6	3.3	14.3	52.4
1974	7.0	8.5	7.6	5.3	4.8	3.1	21.5	91.8		9.9	5.7	30.6	17.0	3.4	13.7	52.4
1975	6.7	8.8	7.7	5.3	4.9	3.2	21.6	90.8		10.2	5.9	30.9	16.7	3.4	13.5	52.3
1976	6.4	9.3	7.7	5.4	5.0	3.3	22.2	89.7	9.7	10.5	6.4	29.5	16.5	3.5	14.4	54.6
1977	5.9	9.5	7.7	5.5	5.1	3.2	22.5	94.9	9.8	10.6	6.6	30.2	16.9	3.5	15.2	55.7
1978	5.6	10.5	7.5	5.6	5.3	3.2	23.3	94.7	10.1	11.4	6.1	25.9	17.1	3.5	15.9	55.1
1979	5.8	10.1	7.6	5.7	5.2	3.2	23.9	93.3	12.5	11.7	6.5	26.5	16.9	3.6	15.9	56.0
1980[1]	5.6	10.3	7.8	5.9	5.1	3.4	24.8	90.6	13.2	11.8	6.6	28.0	16.7	3.7	16.0	58.3
1981[2]	5.2	10.5	8.0	6.0	5.0	3.4	25.0	88.0	14.0	12.2	6.5	28.5	16.0	3.6	16.0	60.0
1982																

[1] Preliminary. [2] Estimate. [3] Data prior to 1972 are in BILLIONS OF POUNDS. *Source: Foreign Agricultural Service, U.S.D.A.*

Milk Cows & Cattle and Milk Production in the U.S.

Year	Number of Milk Cows on Farms[2] (Thousands)	Production Per Milk Cow[3] — Pounds		Total Milk Production[3]			Milk Sold to Plants & Dealers		Milk Sold Directly to Consumers		Milk Utilized Bill. Lbs.	Farm Value of All Milk Mill. $
		Milk	Milk Fat	Quantity Billion Pounds	% of Fat in All Milk Produced	Milk Fat Mil. Lbs.	Quantity Billion Pounds	$ Per 100 Lbs.	Quantity Million Quarts	¢ Per Quart		
1969	12,307	9,434	346	116.1	3.67	4,264	108.5	5.49	785.0	25.8	111.8	6,435
1970	12,000	9,751	357	117.0	3.66	4,284	110.1	5.71	798.6	27.0	113.0	6,757
1971	11,839	10,015	367	118.6	3.66	4,344	112.2	5.87	731.2	27.9	114.8	7,035
1972	11,700	10,259	377	120.0	3.68	4,410	114.2	6.07	714.8	27.8	116.5	7,361
1973	11,413	10,119	370	115.5	3.66	4,225	109.9	7.14	706.9	31.0	112.1	8,331
1974	11,230	10,293	377	115.6	3.67	4,238	110.4	8.33	718.0	34.9	112.4	9,723
1975	11,139	10,360	381	115.4	3.68	4,240	110.5	8.75	726.8	35.4	112.3	10,199
1976	11,032	10,894	399	120.2	3.66	4,402	115.5	9.66	703.1	36.4	117.2	11,706
1977	10,945	11,206	410	122.7	3.65	4,481	118.2	9.72	695.2	36.7	119.8	12,023
1978	10,803	11,243	412	121.5	3.67	4,455	117.2	10.58	693.2	38.8	118.8	12,957
1979	10,743	11,488	421	123.4	3.66	4,518	119.4	12.00	698.8	42.3	120.9	14,949
1980[1]	10,810	11,889	434	128.5	3.65	4,792	124.5	13.00	719.8	45.2	126.1	16,883
1981[1]	10,919	12,147		132.6				13.75				
1982												

[1] Preliminary. [2] Average number on farms during year excluding heifers not yet fresh. [3] Excludes milk sucked by calves & milk produced by cows not on farms. *Source: Crop Reporting Board, U.S.D.A.*

Utilization of Milk in the United States In Millions of Pounds (Milk Equivalent)

Year	Butter from Whey Cream	Creamery Butter[1]	Cheese[6]	Cottage Cheese (Creamed)	Condensed Whole Milk	Evaporated Milk[5]	Dry Whole Milk Products	Frozen Dairy Products[2]	Fluid Consumption		Fed to Calves	Other Mfg. Products[4]
									Nonfarm	Farm[5]		
1969	1,510	23,731	17,616	1,150	714	3,163	489	11,028	52,800	2,397	1,745	424
1970	1,659	23,934	19,566	1,250	572	2,687	508	11,041	51,998	2,306	1,702	480
1971	1,820	23,904	20,947	1,296	537	2,702	535	10,973	51,853	2,117	1,635	705
1972	1,981	22,744	22,763	1,321	594	2,540	552	10,951	53,227	1,914	1,624	762
1973	2,054	18,609	23,605	1,138	560	2,375	577	11,070	52,413	1,766	1,584	744
1974	2,237	19,334	25,669	1,018	592	2,223	499	11,188	50,514	1,643	1,558	804
1975	2,119	19,873	23,883	1,028	686	2,020	464	11,898	51,123	1,495	1,566	672
1976	2,543	19,404	28,763	1,050	643	1,892	554	11,623	51,502	1,392	1,567	744
1977	2,543	21,853	28,865	1,056	580	1,809	514	11,707	51,380	1,283	1,541	684
1978	2,660	19,712	29,917	1,056	534	1,725	549	11,744	51,175	1,168	1,497	707
1979	2,810	19,381	31,557	1,028	568	1,752	627	11,679	51,386	1,031	1,437	1,811
1980[3]	2,998	22,826	33,925	1,016	524	1,594	607	11,926	50,933	950	1,389	1,667
1981[7]				1,000			600	11,800	50,600			
1982												

[1] Excludes whey butter. [2] From milk and cream only. [3] Preliminary. [4] Includes dry cream, malted milk, dry part skim milk, dry ice cream mix. [5] Data includes evaporated & sweetened condensed milk. [6] American & other [7] Estimate. *Source: Crop Reporting Board, U.S.D.A.*

Milk Production on Farms in the United States In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1970	9,405	8,857	10,103	10,295	11,053	10,708	10,212	9,734	9,203	9,278	8,837	9,321	117,007
1971	9,576	8,994	10,220	10,423	11,159	10,815	10,285	9,860	9,328	9,444	9,004	9,427	118,532
1972	9,728	9,391	10,452	10,566	11,268	10,946	10,442	9,978	9,431	9,437	8,911	9,362	119,904
1973	9,532	8,932	10,176	10,298	10,952	10,532	10,014	9,489	8,877	8,948	8,590	9,052	115,491
1974	9,335	8,763	9,989	10,124	10,869	10,615	10,171	9,711	9,137	9,100	8,663	9,109	115,586
1975	9,344	8,766	9,986	10,092	10,778	10,447	9,972	9,538	9,063	9,180	8,830	9,341	115,334
1976	9,600	9,290	10,281	10,464	11,110	10,806	10,444	10,129	9,607	9,626	9,231	9,681	120,269
1977	9,887	9,301	10,572	10,725	11,354	10,989	10,671	10,363	9,820	9,838	9,391	9,787	122,698
1978	9,958	9,242	10,491	10,610	11,151	10,817	10,503	10,182	9,683	9,780	9,320	9,724	121,461
1979	9,960	9,281	10,534	10,603	11,243	10,948	10,683	10,409	9,987	10,063	9,623	10,077	123,411
1980[1]	10,307	9,970	10,946	11,013	11,664	11,321	11,036	10,782	10,364	10,455	10,076	10,494	128,525
1981[1]	10,786	10,129	11,511	11,509	12,055	11,576	11,344	11,104	10,638	10,751	10,384	10,847	132,634
1982[1]	11,047	10,311	11,642										

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

Average Price Received by U.S. Farmers for All Milk[2] (Sold to Plants) In Dollars Per CWT.

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average[1]
1970	5.59	5.58	5.61	5.82	5.93	5.93	5.69	5.64	5.61	5.68	5.75	5.84	5.71
1971	5.79	5.85	5.89	5.96	6.03	5.92	5.84	5.81	5.75	6.07	5.82	5.93	5.87
1972	5.95	6.04	6.07	6.09	6.23	6.14	6.02	6.06	5.97	6.02	6.15	6.29	6.07
1973	6.36	6.50	6.59	6.67	6.88	6.88	6.83	7.26	7.54	7.83	8.16	8.47	7.14
1974	8.89	8.92	8.96	8.84	8.26	7.69	7.75	7.75	8.08	8.35	8.49	8.27	8.33
1975	8.43	8.38	8.22	8.18	8.07	7.99	8.25	8.64	9.25	9.70	10.00	10.30	8.75
1976	10.10	9.76	9.75	9.40	9.25	9.14	9.43	9.70	9.84	9.96	9.89	9.72	9.66
1977	9.65	9.53	9.45	9.44	9.37	9.40	9.49	9.66	9.97	10.10	10.20	10.20	9.72
1978	10.20	10.20	10.20	10.10	10.10	10.00	10.10	10.50	10.90	11.30	11.60	11.80	10.60
1979[3]	11.90	11.90	11.80	11.60	11.50	11.50	11.60	12.00	12.30	12.60	12.90	12.80	12.00
1980[3]	12.80	12.80	12.80	12.70	12.60	12.50	12.60	12.80	13.20	13.70	14.00	14.10	13.00
1981[3]	14.10	14.00	13.80	13.88	13.50	13.40	13.40	13.40	13.80	14.00	14.00	14.10	13.60
1982[3]	13.50	13.53	13.60	13.67									

[1] Weighted average. [2] Adjusted for seasonal variation. [3] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

Farm Price of Milk[1] Eligible for Fluid Market In Dollars Per Hundred Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1972	6.42	6.43	6.31	6.13	6.07	5.99	6.09	6.32	6.57	6.72	7.34	7.39	6.38
1973	6.84	6.90	6.83	6.68	6.67	6.68	6.85	7.45	8.13	8.55	8.89	9.02	7.42
1974	9.09	9.13	9.19	9.16	8.68	8.10	8.00	8.11	8.40	8.67	8.83	8.63	8.66
1975	8.77	8.70	8.51	8.46	8.33	8.24	8.51	8.89	9.49	9.91	10.20	10.50	9.02
1976	10.40	10.10	10.00	9.63	9.49	9.36	9.64	9.91	10.10	10.30	10.20	9.99	9.93
1977	9.91	9.79	9.67	9.63	9.56	9.61	9.72	9.91	10.20	10.40	10.50	10.40	9.96
1978	10.50	10.50	10.40	10.30	10.30	10.20	10.30	10.70	11.00	11.50	11.80	12.00	10.80
1979	12.00	12.10	11.90	11.80	11.70	11.60	11.80	12.20	12.50	12.80	13.10	13.00	12.20
1980	13.00	13.00	12.90	12.80	12.70	12.70	12.70	13.00	13.40	13.90	14.10	14.30	13.20
1981	14.30	14.20	14.00	13.80	13.70	13.60	13.60	13.70	14.00	14.00	14.20	14.20	13.96
1982	14.10	14.00	13.80	13.60									

[1] MILK, Standard Grade, 3.5% milkfat. Weighted average price per 100 pounds (f.o.b. city). *Source: Crop Reporting Board, U.S.D.A.*

U.S. Milk-Feed Price Ratio[1] In Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1978	1.50	1.52	1.51	1.47	1.49	1.43	1.45	1.54	1.59	1.64	1.62	1.63	1.53
1979	1.62	1.59	1.58	1.56	1.53	1.51	1.43	1.51	1.54	1.55	1.59	1.55	1.55
1980	1.54	1.57	1.55	1.55	1.53	1.50	1.47	1.42	1.39	1.42	1.40	1.38	1.48
1981	1.39	1.40	1.42	1.39	1.35	1.36	1.40	1.43	1.48	1.53	1.58	1.55	1.44
1982	1.55	1.54	1.53	1.50									

[1] Pounds of 16% protein ration equal in value to one pound of milk. *Source: Economics & Statistics Service, U.S.D.A.*

Molasses

The USDA Foreign Agricultural Service estimated 1981/82 world production of industrial molasses at 33.7 million tonnes, an increase of 9 percent from the revised 1980/81 estimate of 30.9 million tonnes. World trade in molasses continues to decline as developing countries increasingly use more of their production for domestic consumption.

U.S. imports in 1981 increased 6 percent to 982 thousand tonnes from the "modern times" record-low of 928 thousand in 1980. Leading exporters to the U.S. in 1981 were the Dominican Republic, Colombia, Brazil, Guatemala, and Australia. These five countries accounted for 54 percent of U.S. imports. Mexico accounted for only 3.5 percent of 1981 U.S. imports vs. 19 percent in 1980.

U.S. production of molasses in 1981 totaled 338.5 million gallons, down 7 percent from 1980. U.S. cane molasses production increased 8 percent while beet molasses production declined over 12 percent.

Molasses prices (f.o.b. tankcar) in 1981 were lower than record-high 1980 prices, with cane blackstrap molasses in New Orleans averaging $84.90 per ton and beet molasses in Colorado $85.30 per ton vs. $96.50 and $95.60 per ton, respectively, in 1980. New

World Production of Molasses (Industrial) In Thousands of Metric Tons

Crop Year	Argentina	Brazil	Cuba[2]	France	Germany, West	India	Italy	Mexico	Philippines	Poland	Australia	United Kingdom	United States	U.S.S.R.	World Total
1972–3	478	1,775	1,200	991	629	1,696	370	1,190	836	505	548	322	1,853	3,000	24,425
1973–4	638	2,069	1,312	1,200	669	2,000	250	1,240	1,000	514	599	325	1,596	2,842	26,927
1974–5	612	2,950	1,312	1,179	712	2,000	302	1,227	890	514	586	235	1,592	2,746	26,905
1975–6	557	2,400	1,364	1,013	842	1,700	330	1,227	1,050	642	620	255	1,813	2,735	27,244
1976–7	557	3,000	1,391	1,087	831	2,059	330	1,076	940	670	642	310	2,235	2,700	29,296
1977–8	599	5,400	1,436	1,050	781	2,971	340	1,340	808	656	642	100	1,876	3,242	33,117
1978–9	818	5,000	1,296	952	685	2,564	365	1,410	818	657	577	103	1,916	3,306	32,314
1979–0	789	4,800	1,185	958	653	1,582	390	1,311	827	653	598	350	1,819	3,062	29,720
1980–1[1]	654	5,400	1,111	983	656	2,000	410	1,141	835	469	713	365	2,238	2,669	30,865
1981–2[3]	590	5,700	1,178	1,000	730	2,600	470	1,252	860	755	723	340	2,340	2,749	33,704

[1] Preliminary. [2] Includes hi-test molasses. [3] Estimate. *Source: Foreign Agricultural Service, U.S.D.A.*

Salient Statistics of Industrial Molasses in the United States In Millions of Gallons

	Production in Mainland Areas									Domestic Utilization					
Year	Mainland Cane	Domestic Beet	Refiners' Blackstrap	Citrus	Hydrol	Total	Imports	Total Available Supplies	Exports	Distilled Spirits	Pharmaceuticals & Other Edibles	Yeast, Citric Acid & Vinegar	Total Industrial	Livestock Feeding[2]	Total Utilization
1972	125.6	166.6	39.1	8.3	22.5	362.1	406.8	828.4	3.1	6	57	99	163	678	844
1973	112.4	158.1	44.9	9.8	23.0	348.2	403.3	797.9	4.7	13	59	100	164	641	814
1974	102.1	155.9	45.0	10.6	23.5	337.1	384.3	755.3	12.6	18	59	100	175	559	739
1975	125.4	188.2	45.0	10.2	24.5	393.3	303.3	739.6	12.6	18	59	100	175	559	739
1976	131.7	158.0	50.3	5.8	37.0	382.9	411.2	829.7	6.3	6.9	60.0	100.5	167.4	572.2	740
1977	114.3	167.1	50.7	5.2	39.7	377.0	347.6	743.9	11.2	3.5	48.2	100.9	152.6	665.8	818
1978	106.7	140.2	44.6	4.3	41.7	337.5	271.0	639.8	22.9	7.4	25.6	92.7	125.7	618.2	744
1979	107.4	164.6	39.0	3.5	40.3	354.8	231.7	624.7	20.3	8.8	19.3	77.7	105.8	519.0	624.8
1980[1]	109.7	113.3	34.7	6.3	39.7	352.1	140.3	468.8	19.3	8.2	18.8	77.5	104.5	364.3	468.8
1981	122.8	148.7	41.4	6.1	19.5	338.5	149.0	524.8	23.7	4.9	19.1	75.2	99.2	425.6	524.8

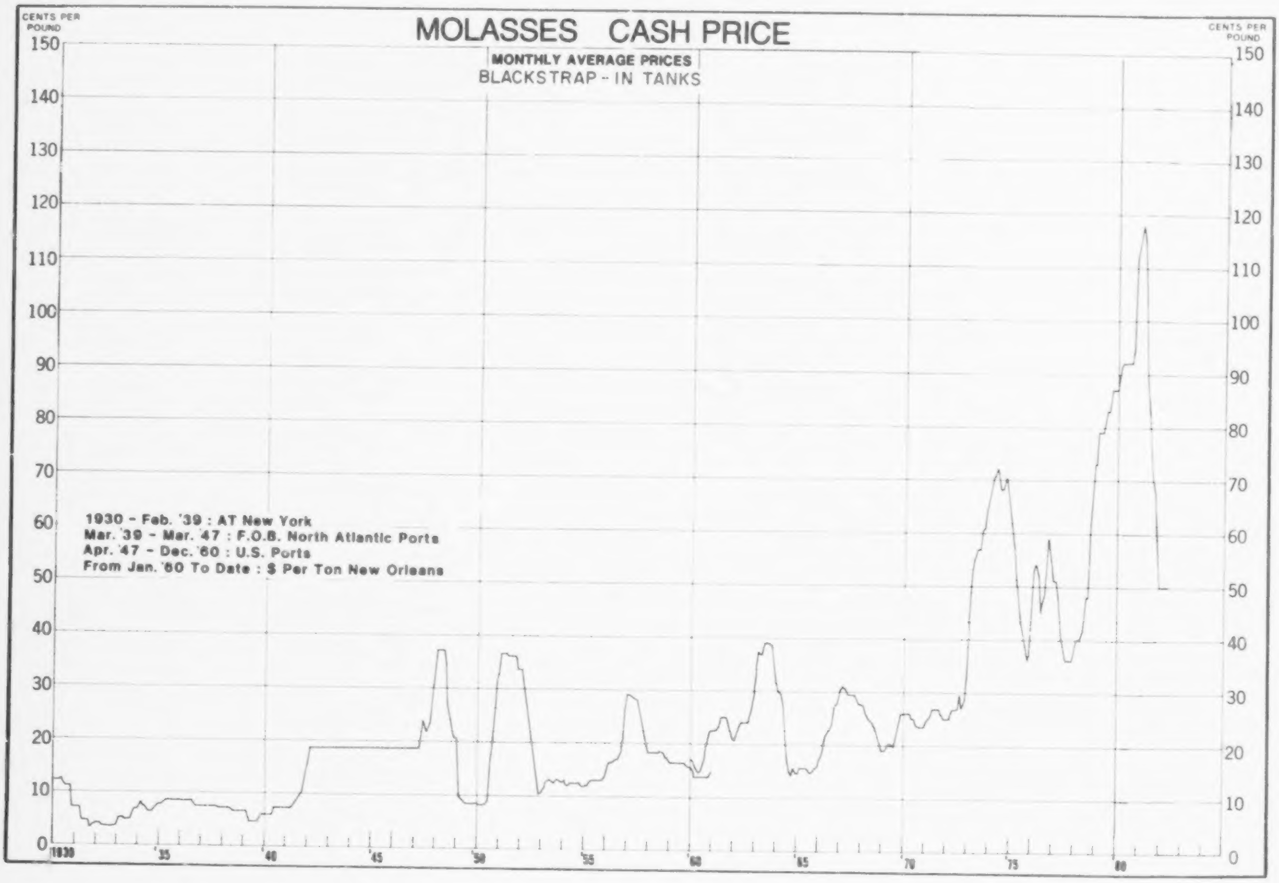
[1] Preliminary. [2] Residual. *Source: Agricultural Marketing Service, U.S.D.A.*

U.S. Annual Average Prices of Molasses, by Types (F.O.B. Tank Car or Truck) In Dollars Per Ton

	Blackstrap						Beet Molasses			Citrus Molasses
Year	New Orleans	South Florida	Baltimore	Minneapolis	Omaha	Calif. Ports	Colorado	Wyo. & Montana	Ore., Utah & Idaho	Florida
1974	68.37	67.40	72.25	88.63	88.37	70.82	78.65	78.65	71.26	45.81
1975	45.32	45.63	51.37	62.75	63.81	50.03	55.80	61.81	59.70	41.97
1976	52.07	51.41	57.60	72.28	70.46	52.96	66.87	65.02	61.79	39.52
1977	40.55	42.52	47.08	54.62	58.84	42.96	41.76	45.41	55.10	50.65
1978	51.50	52.40	59.25	67.30	72.55	54.00	60.40	58.35	60.95	61.05
1979	82.95	85.50	91.20	107.90	107.75	84.05	85.30	82.65	N.A.	79.40
1980	96.50	96.80	106.75	124.45	128.85	101.70	95.60	96.55	N.A.	103.65
1981[2]	84.90	90.00	99.30	111.20	119.40	89.20	85.30	95.20	N.A.	103.10

[1] Per ton prices are based on 171 gallons for blackstrap, beet and corn molasses and on 175 gallons for citrus molasses. Prices represent sales F.O.B. terminal to the general feed trade and do not include sales made under various pricing arrangements above or below prices generally available to the ultimate user. Ton—2,000 lbs. Gallon—U.S. gallon. Prices are not rounded off to the nearest 5 cents. [2] Preliminary. *Source: Molasses Market News, Annual Summary, AMS, U.S.D.A. Denver Colorado, and Molasses Market News, Weekly, various issues*

Orleans cane molasses prices peaked in January 1981 at $118 per ton and then declined to $50 per ton by November 1981, and were steady at $50 per ton during early 1982.



Wholesale Price of Blackstrap Molasses (Cane) at New Orleans In Dollars Per Ton

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1970	25.65	25.65	25.65	25.65	24.80	24.80	23.50	23.20	23.10	23.10	23.20	23.10	24.28
1971	24.20	24.60	25.00	26.50	26.50	26.50	26.50	26.50	25.60	25.20	24.80	24.80	25.56
1972	24.80	24.80	26.00	26.50	26.50	26.50	26.60	29.60	26.90	27.40	28.40	32.40	27.20
1973	43.20	48.90	53.40	55.20	56.40	57.00	57.00	60.10	60.80	64.20	65.50	67.75	57.45
1974	68.80	70.50	71.00	72.00	69.50	68.00	68.00	69.25	70.40	67.00	64.00	62.00	68.37
1975	60.00	57.75	51.30	50.00	46.00	43.00	41.00	39.00	38.00	36.00	37.00	46.00	45.42
1976	53.00	54.00	53.00	52.00	45.00	47.00	48.00	54.00	59.00	57.00	52.00	51.00	52.08
1977	51.00	51.00	48.00	42.00	40.00	38.00	36.00	36.00	36.00	36.00	36.00	38.00	40.67
1978	40.00	40.00	40.00	41.00	42.00	46.00	48.00	48.00	56.00	65.00	73.00	73.00	51.08
1979	79.00	79.00	79.00	79.00	81.00	83.00	83.00	85.00	87.00	87.00	87.00	87.00	83.00
1980	89.90	91.50	92.00	92.00	92.00	92.00	92.00	92.00	94.40	103.50	111.60	113.00	96.40
1981	116.75	118.00	115.00	103.00	95.50	88.00	83.00	71.60	67.50	58.75	52.00	50.00	76.30
1982	50.00	50.00	50.00	50.00									
1983													

Source: Economics Service, U.S.D.A.

Molybdenum

Molybdenum is a refractory metallic element primarily used as an alloying agent in steels, cast irons, and superalloys to enhance hardness, wear and corrosion resistance. The United States continues as the world's leading producer and exporter of molybdenum.

The 1981 molybdenum market was featured by oversupply conditions and sharply lower prices, compared to 1980, as a drop in consumption exceeded the reduction in mine production. U.S. mine production of molybdenum in 1981 was 9 percent below that of 1980, and was expected to be reduced further in 1982 as a result of reported mine curtailment or closures. Domestic net production of molybdic oxides in 1981 was 29.5 percent below that of 1980.

U.S. consumption of molybdenum concentrate (converted to technical-grade oxide) in 1981 was 25.4 percent lower than in 1980 as markets continued depressed. Shipments of molybdic oxide were 35 percent below the 1980 level. Major end use applications of molybdenum in 1981 (as a percentage of total use) were estimated as follows: machinery—34 percent; oil and gas industry—20 percent; transportation—17 percent; chemicals—13 percent; electrical—8 percent; other applications—8 percent.

Exports of molybdenum ore and concentrate from the U.S. in 1981 were 25 percent lower than a year earlier. The Netherlands continued as the major market for U.S. exports, followed by Japan and the Federal Republic of Germany. Shipments to Belgium-Luxembourg dropped sharply.

U.S. producer molybdenum stocks in concentrate, oxide and other products at the end of 1981 were 80 percent larger than on December 31, 1980. U.S. producer prices for technical-grade molybdic oxide (per pound of contained molybdenum) dropped from $9.70 per pound at the start of 1981 to a list price as low as $6.85 per pound by the yearend. Dealer prices declined from around $7.85 per pound at the start of 1981 to as low as $3.60 late in the year.

World Mine Production of Molybdenum In 1,000 Pounds (Contained Molybdenum)

Year	Canada[3]	Australia	Bulgaria	Chile	USSR	Japan	South Korea	China	Mexico	Norway	Philippines	United States	Peru	World Total
1969	29,651			10,675	16,700	591	287		445	785	35	99,807	494	159,470
1970	33,772			12,569	17,000	582	254	3,300	311	750	71	111,352	1,338	181,429
1971	22,663			13,935	17,600	613	231	3,300	174	725	9	109,592	1,782	171,064
1972	28,493			13,045	18,100	494	111	3,300	172	562	—	112,138	1,689	178,423
1973	30,391			12,974	18,700	345	112	3,300	90	220	—	115,859	1,395	183,698
1974	30,736			21,466	19,400	235	166	3,300	95	—	—	112,011	1,434	185,568
1975	28,719	25		20,042	20,000	309	166	3,300	37	—	—	105,980	1,435	180,288
1976	32,229	0	300	24,028	20,600	485	265	3,300	35	—	—	113,233	999	195,474
1977	36,526	0	330	24,114	21,400	401	223	3,300	2	—	—	122,408	1,021	209,725
1978	31,015	—	330	29,092	21,800	271	485	4,440	24	—	121	131,843	1,607	220,988
1979	24,636	—	330	29,892	22,500	258	417	4,400	105	—	273	143,967	2,606	229,384
1980[1]	26,892	—	330	29,412	22,900	260	581	4,400	130	—	310	150,686	2,200	238,101
1981[2]	24,000			26,000								145,000	2,000	223,800
1982														

[1] Preliminary. [2] Estimate. [3] Shipments. *Source: Bureau of Mines*

Salient Statistics of Molybdenum in the United States In Thousands of Pounds (of Contained Molybdenum)

	Concentrate							Primary Products[3]							
		Shipments						Net Production				Shipments			
Year	Production	Total (Includes Exports)	Value Mill. $	For Exports	Consumption	Imports for Consumption	Stocks Dec. 31[2]	Grand Total	Molybdic Oxide[4]	Molybdenum Metal Powder	Sodium Molybdate	To Domestic Destinations	For Exports	Consumption	Producers' Stocks Dec. 31
1969	99,807	103,009	173.8	29,528	73,275	—	8,398	68,526	51,515	2,314	603	57,947	19,779	51,622	17,844
1970	111,352	110,381	190.1	32,998	76,101	25	9,715	75,383	57,669	1,741	743	58,365	17,730	45,337	25,904
1971	109,592	97,882	164.9	31,513	66,399	851	29,077	67,016	49,918	2,418	865	52,644	14,010	40,950	31,048
1972	112,138	102,197	170.5	34,390	62,560	385	45,243	64,841	47,934	3,637	1,111	59,420	16,118	45,558	28,898
1973	115,859	135,097	217.7	48,529	82,477	458	21,998	85,046	63,280	3,631	1,538	67,365	41,322	57,049	22,387
1974	112,011	118,163	234.7	39,965	91,706	155	18,659	88,509	66,378	2,953	1,784	75,929	38,870	63,476	16,078
1975	105,980	105,170	259.3	36,618	90,046	2,567	10,680	87,501	70,143	2,953	1,069	89,789	33,084	51,743	22,863
1976	113,233	114,527	333.5	30,935	84,966	2,093	9,390	83,970	65,743	3,839	1,132	99,144	31,796	50,448	13,210
1977	122,408	124,974	450.4	29,666	91,041	1,976	9,161	90,520	68,671	4,142	1,275	100,626	33,332	54,557	10,141
1978	131,843	130,694	608.0	31,183	96,375	2,705	8,980	96,052	83,220	4,194	1,489	105,921	35,353	61,091	7,996
1979	143,967	143,504	871.1	36,405	103,152	2,329	9,520	101,753	79,035	4,946	1,541	109,419	35,773	60,388	8,502
1980[1]	150,686	149,311	1,344	35,026	108,206	1,825	18,101	106,284	84,554	4,904	1,142	95,391	35,557	53,265	27,007
1981[5]	137,303	119,285		37,328	80,725	1,800	35,548	76,840	59,645	3,513	96	64,368		47,759	
1982															

[1] Preliminary. [2] At mines & at plants making molybdenum products. [3] Comprises ferromolybdenum, molybdic oxide, & molybdenum salts & metal. [4] Includes molybdic oxide briquets, molybdic acid, & molybdenum trioxide. [5] Estimate.
Source: Bureau of Mines

Nickel

World production of nickel in 1981 was about 16 percent smaller than in 1980 because output was cut back to meet reduced demand levels, according to preliminary data of the U.S. Bureau of Mines. U.S. consumption of nickel, excluding those companies reporting annually, was estimated at 7 percent below the 1980 level as depressed market conditions prevailed for the second consecutive year. However, U.S. imports of nickel in 1981 were 8 percent larger than the year earlier. U.S. reserves of nickel are small and imports account for about 72 percent of apparent consumption, with the recovery of secondary nickel from scrap accounting for most of the remainder. Ending stocks of nickel held by U.S. consumers on December 31, 1981 were about 65 percent larger than at the end of 1980, as a number of large users were reported to have made very large purchases of relatively low-priced nickel during December.

Although the U.S. producer price for nickel cathode remained unchanged at $3.45 per pound throughout 1981, significant discounting continued to the year-end because of the soft market conditions.

Nickel futures are traded on the London Metal Exchange (LME).

World Mine Production of Nickel In Thousands of Short Tons of Contained Nickel

Year	Australia[3]	Philippines	Canada	Cuba	Finland[3]	Indonesia	Brazil	Domin. Repub.	Zimbabwe	N. Caledonia	Greece	Poland	South Africa	USSR	United States	World Trade
1972			259.0	35.0	5.9	24.7	3.7		13.2	98.0	21.7	1.7	12.8	115.0	16.9	673.8
1973			274.5	35.0	6.6	22.9	3.9		13.0	120.5	28.9	1.7	21.4	125.0	18.3	757.4
1974	22.0	—	296.6	37.4	6.6	23.3	3.9	33.6	12.7	148.3	31.4	2.2	24.4	138.0	16.6	849.3
1975	40.0	10.3	367.0	40.3	6.1	21.2	3.5	29.7	11.0	146.9	31.0	2.8	22.9	168.0	17.0	890.5
1976	91.0	16.8	265.5	40.7	7.2	31.7	5.8	26.9	16.1	121.2	18.8	2.8	24.7	155.0	16.5	873.4
1977	94.7	40.5	256.3	40.8	6.7	36.5	4.7	27.4	18.4	115.9	11.0	2.6	24.2	159.0	14.3	886.7
1978	90.8	32.5	152.5	40.8	5.1	35.2	4.0	15.8	17.3	72.9	17.6	2.3	24.8	163.0	13.5	727.9
1979	76.8	31.7	139.4	38.6	9.3	41.1	3.4	27.7	16.1	91.3	15.4	2.3	32.5	168.0	15.1	753.2
1980[1]	78.8	42.2	214.9	40.8	9.2	41.0	3.6	15.4	16.6	96.8	28.7	2.3	32.0	170.0	14.7	850.4
1981[2]			190.0	40.0						50.0					15.6	716.0

[1] Preliminary. [2] Estimate. [3] Content of nickel sulfate and concentrates. *Source: Bureau of Mines*

Salient Statistics of Nickel in the United States In Short Tons

		Production		Nickel Consumed[1], By Uses										Stocks, Dec. 31	Nickel & Pdt's (Gross Weight)	
Year	Net Import Reliance as a % of Apparent Consumption	Primary	Secondary	Alloy Steels	Cast Irons	Copper Base Alloys	Magnet Alloys	Electroplating Anodes	Nickel Alloys	Stainless & Heat Resisting Steels	Super Alloys	Chemicals	Total All	At Consumers' Plants	Imports	Exports
1973		13,895	32,629	44.7	6.8	17.1	10.5	51.1	85.8	137.2			197,723	28,759	190,418	22,070
1974		14,093	20,930	23.3	5.3	9.3	5.3	26.2	44.1	73.8			208,409	45,291	220,655	30,442
1975	72	14,343	17,880	20.3	4.4	9.4	3.3	19.2	37.2	38.2			146,495	35,485	160,507	30,121
1976	72	13,869	13,273	19.1	4.0	7.4	5.8	28.7	32.5	48.6	9.1	2.6	162,927	31,690	188,147	47,166
1977	75	12,897	12,449	17.8	3.7	7.0	.7	21.8	31.9	53.2	11.4	2.5	155,260	18,581	194,770	39,412
1978	80	11,298	12,304	17.2	4.3	7.0	.8	27.3	39.6	60.5	15.7	1.9	180,723	20,443	234,352	36,293
1979	69	11,691	13,201	20.2	4.7	8.5	.7	28.5	41.1	69.6	17.6	1.2	196,293	19,248	177,205	50,810
1980[2]	73	11,225	11,338	16.9	4.0	8.8	.5	18.8	27.4	54.7	19.2	1.5	156,299	15,398	189,168	56,675
1981[3]	72	12,000		14.5	1.9	10.7	.5	22.0	10.7	46.7	10.9	.9	130,500	19,888	180,000	50,000

[1] Exclusive of scrap. [2] Preliminary. [3] Estimate. *Source: Bureau of Mines*

Average Price of Nickel (Spot Cathode Sheets—Duty Paid—F.O.B. Refinery)
In Cents Per Pound—In Carload or Truckload Lots

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1972	133.0	133.0	133.0	133.0	133.0	133.0	133.0	133.0	153.0	153.0	153.0	153.0	139.7
1973	153.0	153.0	153.0	153.0	153.0	153.0	153.0	153.0	153.0	153.0	153.0	153.0	153.0
1974	162.0	162.0	162.0	162.0	162.0	162.0	185.0	185.0	185.0	185.0	185.0	185.0	173.5
1975	201.0	201.0	201.0	201.0	201.0	201.0	201.0	201.0	220.0	220.0	220.0	220.0	207.3
1976	220.0	220.0	220.0	220.0	220.0	220.0	220.0	220.0	220.0	241.0	241.0	241.0	225.3
1977	241.0	241.0	241.0	238.0	241.0	241.0	241.0	241.0	215.5	215.5	210.0	207.0	231.1
1978	207.0	207.0	207.0	210.0	210.0	200.0	208.0	208.0	204.0	202.5	202.5	196.5	205.2
1979	196.5	205.0	205.0	242.5	272.5	305.0	302.5	302.5	302.5	302.5	302.5	315.0	271.2
1980	325.0	325.0	350.0	350.0	350.0	350.0	350.0	350.0	350.0	350.0	350.0	350.0	345.8
1981	350.0	350.0	350.0	350.0	350.0	350.0	350.0	350.0	350.0	350.0	350.0	339.5	
1982	329.0												

Source: Bureau of Labor Statistics (1022-0128)

Oats

U.S. oat production in 1981 was estimated at 508 million bushels, 11 percent greater than the 1980/81 crop, but 4 percent less than the 1979/80 crop. Except for the 1980 crop, the 1981 crop was the smallest since 1881.

Growers harvested 9.4 million acres for grain in 1981, 8 percent above 1980 harvested acreage, which was the smallest harvested acreage since 1867. Yield per harvested acre in 1981 averaged 54.0 bushels compared with 53.0 bushels in 1980. Acres abandoned and utilized for purposes other than grain accounted for 31 percent of the planted acres compared with 35 percent in 1980. The drought in the summer of 1980 sharply reduced the acreage harvested that year.

Increased acreage and yields in the major producing states accounted for the bigger 1981 crop. The most significant increase from 1980 was in North Dakota. Of the major producing states, harvested acreage expanded in Minnesota, Nebraska, North Dakota, and South Dakota. Yields increased in Iowa, Minnesota, and North Dakota.

Oat disappearance was projected at 520 million bushels in 1981/82, slightly above a year ago. Domestic feed and residual disappearance was estimated to be up slightly, and exports down from 1980/81.

Ending stocks for 1981/82 were forecast at 166 million bushels, 11 million below a year earlier. The stocks-to-use ratio was 32 percent, down from 34 percent in 1980/81. Oats in all storage positions on January 1, 1982, totaled 365 million bushels, down 7 percent from the previous year and the lowest amount in storage on January 1 since records began in 1942. Indicated disappearance during October–December 1981 was 93 million bushels, down 1 percent from the comparable period last year, but 2 percent above the October–December 1979 disappearance. Ending stocks for the 1981/82 season ending May 31, 1982 were projected by the USDA at 156 million bushels vs. 177 million bushels estimated in 1980/81.

The USDA estimated that U.S. farm prices of oats would average $1.80 to $1.90 per bushel in 1981/82, up from $1.79 last year.

U.S. producers indicated plans to seed 14.7 million acres of oats in 1982, 8 percent more than 1981. Prospective plantings in the major producing states were substantially higher than a year earlier because of strong oat prices. South Dakota, the leader at 2.6 milliaon acres, reported an increase of 16 percent. Minnesota, at 1.7 million acres, reported a 6 percent increase. Texas, with 1.4 million acres, indicated plantings 7 percent above 1981. However, a wet spring reported to be delaying plantings in some areas could result in actual plantings not meeting intentions.

U.S. Government Support Program

The 1982 crop national average regular loan level for oats is $1.31 per bushel for oats grading No. 3 or better, up from $1.24 for the 1981 crop. The 1982 loan rate for oats entered into the Grain Reserve was raised to $1.49 per bushel from $1.31 in 1981. The trigger release price for oats in the Grain Reserve was set at $1.65 per bushel. Oats were included in the 1982 Feed Grain Program target provisions. The 1982 target price was set at $1.50 per bushel. Oats were also included in the 1982 feedgrain acreage set-aside program. In order for producers to qualify for regular and Reserve loans, and target price protection in 1982, they must comply with provisions of the acreage set-aside program.

Futures Markets

Oat futures are traded on the Chicago Board of Trade, the MidAmerica Commodity Exchange in Chicago, and the Winnipeg Commodity Exchange in Canada.

Salient Statistics of Oats in the United States & Canada

Year Begin. July	Acreage		Yield Per Harv. Acre	Farm Value of Product	Farm Disposition		U.S. Government Price Support Program						Average Prices No. 2 Heavy	
							Owned By CCC July 1	Under Price Support			Deliveries To CCC	Nat. Avg. Sup. Rate	White, Portland	Chicago
	Planted[3]	Harvested[3]			Feed & Seed	Sold		Loans	Purch. Agree.	Total				
	1,000 Acres		Bushels	Mill. $	Mil. Bu.		1,000 Bushels					$ Bu.	Dollars per Bushel	
1969–0	23,561	17,971	53.7	572	586	380	61,088	152,500	10,100	162,600	62,000	.63	.74	.64
1970–1	24,410	18,594	49.2	582	561	354	104,254	108,900	4,800	113,700	26,600	.54	.80	.77
1971–2	21,831	15,705	55.9	544	539	339	168,910			81,900	700	.54	.83	.74
1972–3	19,990	13,410	51.5	507	428	262	178,128			31,800	—	.54	1.02	.88
1973–4	18,605	13,770	47.9	775	404	256	104,942			10,392	—	.54	1.57	1.40
1974–5	17,013	12,608	47.6	912	389	212	24,000			3,900	—	.54	1.96	1.75
1975–6	16,486	13,038	49.0	924	395	244	5,800			3,928	—	.54	1,86	1.54
1976–7	16,734	11,834	45.7	835	350	190	—			4,631	—	.72	1.80	1.71
1977–8	17,733	13,485	55.8	823	457	295	—			82,679	100	1.03	1.44	1.36
1978–9	16,407	11,126	52.3	689	367	216	100			24,849	1,300	1.03	1.79	1.37
1979–0	13,957	9,679	54.4	714	321	205	2,400			12,000	600	1.08	1.87	1.60
1980–1[1]	13,377	8,652	53.0	823	298	160	2,200			6,000	—	1.16	2.42	1.99
1981–2[1]	13,646	9,411	54.0							9,000	—	1.24	2.30	
1982–3[1]	14,705											1.31		

[1] Preliminary. [2] For all purposes. [3] For grain. *Source: Statistical Reporting Service, U.S.D.A.*

United States Official Oat Crop Production Reports In Thousands of Bushels

Year	June 1	July 1	August 1	September 1	October 1	December[1]	Final
1970	[2]	957,525	902,800	891,800	891,310	909,481	915,236
1971	[2]	850,960	885,049	884,642	884,642	875,775	878,079
1972	[2]	711,909	736,775	730,762	730,762	694,967	690,616
1973	[2]	716,615	707,756	702,280	702,280	663,860	659,136
1974	[2]	684,021	637,951	648,711	648,711	620,539	600,655
1975	[2]	731,431	697,834	677,754	677,754	656,862	638,960
1976	[2]	498,938	548,542	563,997	—	562,452	540,441
1977	[2]	707,074	757,589	758,669	—	747,914	752,774
1978	[2]	635,551	636,785	595,879	—	601,477	581,657
1979	[2]	509,761	530,967	531,232	—	534,386	526,551
1980	[2]	449,504	440,655	450,660	—	457,593	458,263
1981[1]	[2]	528,118	522,408	509,457	—	508,083	

[1] Preliminary. [2] No estimate. *Source: Crop Reporting Board, U.S.D.A.*

Oats Under Price Support Through the End of the Month (Cumulative Totals from Current Season's Crop) In Millions of Bushels

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total
1970–1	6.7	23.8	59.1	75.2	82.3	86.9	98.2	100.7	103.1	106.7	108.5	108.9	113.7
1971–2	1.6	18.4	46.9	61.4	66.9	70.2	76.8	78.3	79.4	80.9	81.7	81.8	81.9
1972–3	.5	5.3	18.8	25.8	28.5	29.6	31.1	31.4	31.6	31.7	31.8	31.8	31.8
1973–4	.4	4.4	7.5	8.7	9.6	10.0	10.3	10.3	10.4	10.4	10.4	10.4	10.4
1974–5	.3	1.8	2.9	3.4	3.6	3.7	3.8	3.8	3.9	3.9	3.9	3.9	3.9
1975–6	.4	1.5	2.0	3.0	3.2	3.7	3.8	3.9	3.9	3.9	3.9	3.9	3.9
1976–7	.4	1.0	1.7	2.6	3.4	4.0	4.2	4.3	4.4	4.4	4.4	4.4	4.4
1977–8	7.8	30.0	48.5	54.9	59.5	62.3	65.3	67.1	73.2	76.1	77.9	78.9	78.9
1978–9	.5	8.2	14.9	18.5	21.2	22.4	23.9	24.2	24.5	24.7	24.8	24.8	24.8
1979–0	—	2.2	5.0	7.1	8.7	9.5	10.5	11.0	11.6	12.1	12.2	12.2	12.2
1980–1	—	1.8	3.4	4.4	4.9	5.7	6.0	6.1	6.2	6.3	6.3	6.3	6.3
1981–2	.6		6.1	7.4	8.0	8.7	9.3	9.5	9.6				

Source: U.S. Department of Agriculture

Average Price Received by U.S. Farmers for Oats In Cents Per Bushel

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Average[1]
1970–1	58.0	56.7	61.0	61.3	63.2	65.0	66.8	67.5	65.8	63.4	66.0	70.7	62.3
1971–2	62.6	55.5	57.4	58.1	59.5	62.2	63.8	63.6	63.8	63.5	63.8	66.6	60.5
1972–3	65.5	62.3	64.5	67.1	70.0	80.6	81.1	77.6	77.1	77.4	79.6	90.4	72.5
1873–4	85.5	113	109	114	113	120	132	144	140	124	127	130	118
1974–5	137	155	157	168	170	170	162	158	146	151	154	149	153
1975–6	145	144	145	141	140	142	144	146	146	144	147	164	146
1976–7	164	148	149	146	145	151	158	163	164	164	152	129	156
1977–8	102	92.9	93.8	104	110	113	118	122	117	119	124	116	110
1978–9	108	106	106	108	115	119	122	125	127	129	129	135	120
1979–0	133	124	129	131	141	131	139	137	134	138	143	148	136
1980–1	150	153	163	165	184	192	198	201	208	205	205	199	182
1981–2	182	173	174	178	188	194	197	199	202	198			

[1] Weighted average by sales. *Source: Crop Reporting Board, U.S.D.A.*

OATS

World Production of Oats In Thousands of Metric Tons

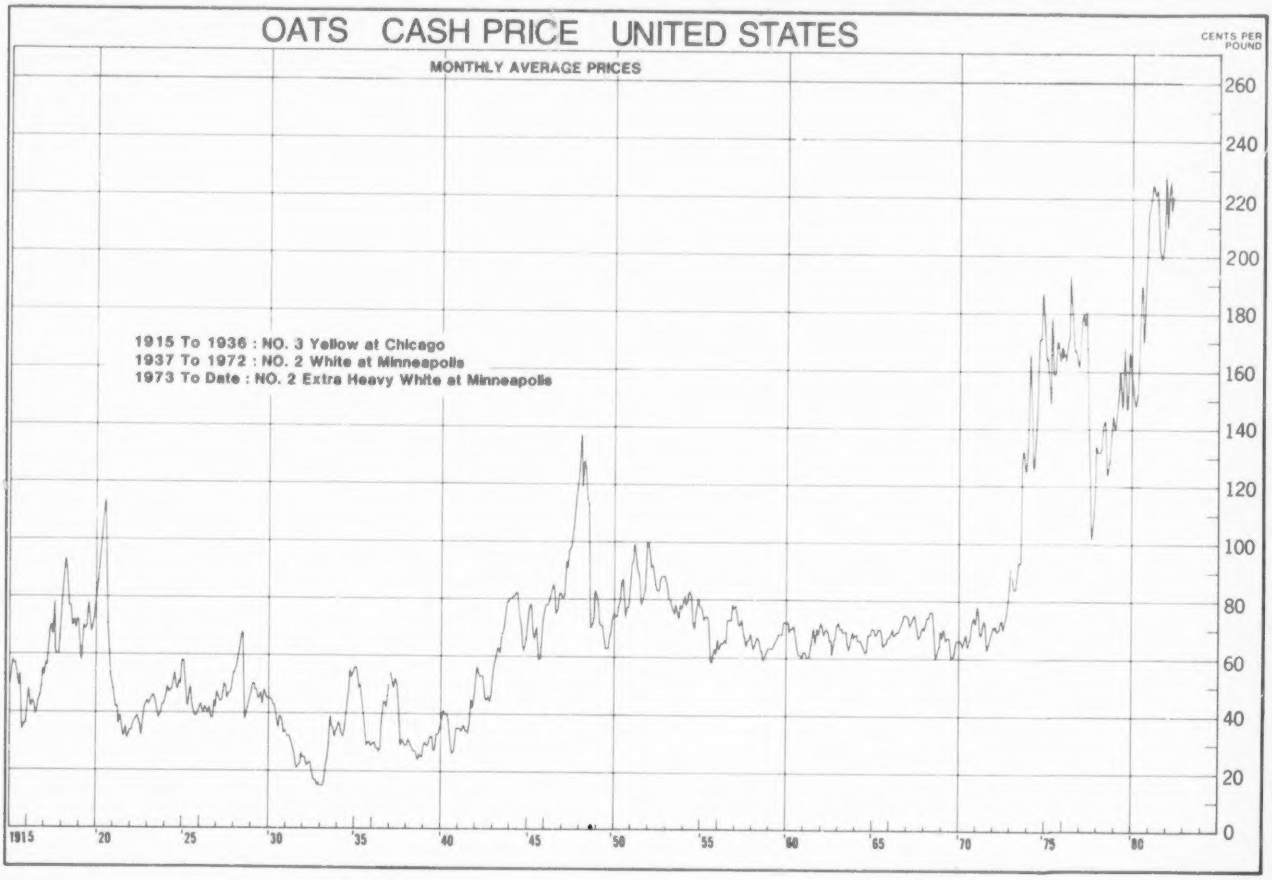
Crop Year	United States	Canada	Argentina	Australia	Turkey	U.S.S.R.	W. Germany	Spain	Netherlands	Denmark	France	Sweden	Un. King.	Poland	World Total
1972–3	10,044	4,630	566	740	396	14,100	3,909	440	144	637	3,084	1,630	1,255	3,212	51,286
1973–4	9,681	5,041	561	1,107	376	17,516	4,155	425	134	444	2,204	1,209	1,080	3,220	53,872
1974–5	8,912	3,929	327	874	380	15,257	3,482	559	163	472	2,081	1,686	950	3,244	49,320
1975–6	9,551	4,466	433	1,141	390	12,495	3,445	609	158	367	1,948	1,345	795	2,920	47,044
1976–7	7,930	4,831	530	1,073	400	18,113	2,497	505	103	256	1,402	1,251	764	2,695	48,744
1977–8	10,901	4,303	570	991	370	18,407	2,714	421	94	288	1,928	1,416	790	2,561	51,508
1978–9	8,730	3,621	676	1,763	370	18,507	4,049	553	149	206	2,203	1,550	706	2,492	51,753
1979–0[1]	7,643	2,978	522	1,419	370	15,200	3,697	443	109	163	1,845	1,524	542	2,186	45,196
1980–1[1]	6,652	3,028	610	1,200	350	16,700	3,228	660	93	168	1,906	1,685	620	2,050	45,437
1981–2[2]	7,375														

[1] Preliminary. [2] Estimated. *Source: Foreign Agricultural Service, U.S.D.A.*

Average Cash Price[1] of No. 2 Extra Heavy White Oats[2] at Minneapolis In Cents Per Bushel

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Average[1]
1972–3	69.0	70.0	71.0	76.0	81.0	91.0	88.0	84.0	84.0	86.0	91.0	93.0	80.0
1973–4	93.0	128	132	126	125	132	155	166	152	126	135	143	130
1974–5	163	168	171	187	180	174	164	164	149	172	178	159	168
1975–6	159	170	168	164	169	165	167	166	164	167	172	193	166
1976–7	184	167	167	166	162	167	178	180	176	181	168	138	174
1977–8	115	102	111	117	134	132	132	132	133	140	143	136	127
1978–9	124	128	136	139	147	140	147	154	160	148	155	168	143
1979–0	160	147	155	165	167	159	152	150	148	152	162	188	157
1980–1	190	170	186	196	215	216	220	225	223	221	223	218	209
1981–2	202	199	202	209	228	210	223	226	216				

[1] Weighted average of reported daily cash sales. [2] No. 2 WHITE prior to July 1971. *Source: Department of Agriculture*



Quarterly Supply and Distribution of Oats in the United States In Millions of Bushels

Year & Periods Begin. June 1	Supply				Disappearance							Stocks		
					Domestic Use									
	Beginning Stocks	Production	Imports	Total Supply	Food	Alc. Bever.	Seed	Feed	Total	Exports	Total Disap.	Gov't. Owned[2]	Privately Owned[3]	Total Stocks
1977–8	164.3	752.8	2.2	919.3	42.0	—	42.5	509.4	593.9	12.3	606.2	—	313.1	313.1
June–Sept.	164.3	752.8	1.1	918.2	14.4	—	2.1	219.5	236.0	2.7	238.7	—	679.5	679.5
Oct.–Dec.	679.5	—	.5	680.0	10.7	—	2.1	92.4	105.2	6.8	112.0	—	568.0	568.0
Jan.–Mar.	568.0	—	.4	568.4	10.1	—	8.5	126.5	145.1	1.5	146.6	—	421.8	421.8
Apr.–May	421.8	—	.2	422.0	6.8	—	29.8	71.0	107.6	1.3	108.9	—	313.1	313.1
1978–9	313.1	581.7	.7	895.5	41.0	—	36.1	525.7	602.8	12.7	615.5	2.7	277.3	280.0
June–Sept.	313.1	581.7	.3	895.1	14.7	—	1.8	224.8	241.3	7.9	249.2	1.5	644.4	645.9
Oct.–Dec.	645.9	—	.1	646.0	10.3	—	1.8	84.2	96.3	3.4	99.7	2.5	543.8	546.3
Jan.–Mar.	546.3	—	.2	546.5	10.7	—	7.2	146.3	164.2	.7	164.9	2.7	378.9	381.6
Apr.–May	381.6	—	.1	381.7	5.3	—	25.3	70.4	101.0	.7	101.7	2.7	277.3	280.0
1979–80	280.0	526.6	.9	807.5	40.7	—	34.6	491.7	567.0	4.1	571.1	2.7	233.7	236.4
June–Sept.	280.0	526.6	.3	806.9	14.6	—	1.7	221.6	237.9	.9	238.8	2.6	565.5	568.1
Oct.–Dec.	568.1	—	.2	568.3	10.4	—	1.7	77.5	89.6	1.9	91.5	2.6	474.2	476.8
Jan.–Mar.	476.8	—	.2	477.0	10.3	—	6.9	119.7	136.9	.5	137.4	2.7	336.9	339.6
Apr.–May	339.6	—	.2	339.8	5.4	—	24.3	72.9	102.6	.8	103.4	2.7	233.7	236.4
1980–1[1]	236.4	458.3	1.3	696.0	41.0	—	33.0	431.8	505.8	13.3	519.1	2.5	174.4	176.9
June–Sept.	236.4	458.3	.6	695.3	15.0	—	1.8	190.0	206.8	3.9	210.7	2.7	481.9	484.6
Oct.–Dec.	484.6	—	.2	484.8	10.0	—	1.8	79.2	91.0	2.8	93.8	2.7	388.3	391.0
Jan.–Mar.	391.0	—	.3	391.3	10.0	—	7.0	115.6	132.6	2.6	135.2	2.5	253.6	256.1
Apr.–May	256.1	—	.2	256.3	6.0	—	22.4	47.0	75.4	4.0	79.4	2.5	174.4	176.9
1981–2[1]	176.9	508.1	1.0	686.0	41.0	—	34.0	435.0	510.0	10.0	520.0			166.0
June–Sept.	176.9	508.1	.3	685.3	16.0	—	2.0	206.3	224.3	3.2	227.5	1.7	456.1	457.8
Oct.–Dec.	457.8	—	.2	458.0	10.0	—	2.0	80.1	92.1	1.2	93.3	1.7	363.0	364.7
Jan.–Mar.														
Apr.–May														

[1] Preliminary. [2] Uncommitted inventory. [3] Includes quantity under loan & farmer-owned reserve.
Source: Economic Research Service, U.S.D.A.

Production of Oats in the United States, by States In Millions of Bushels

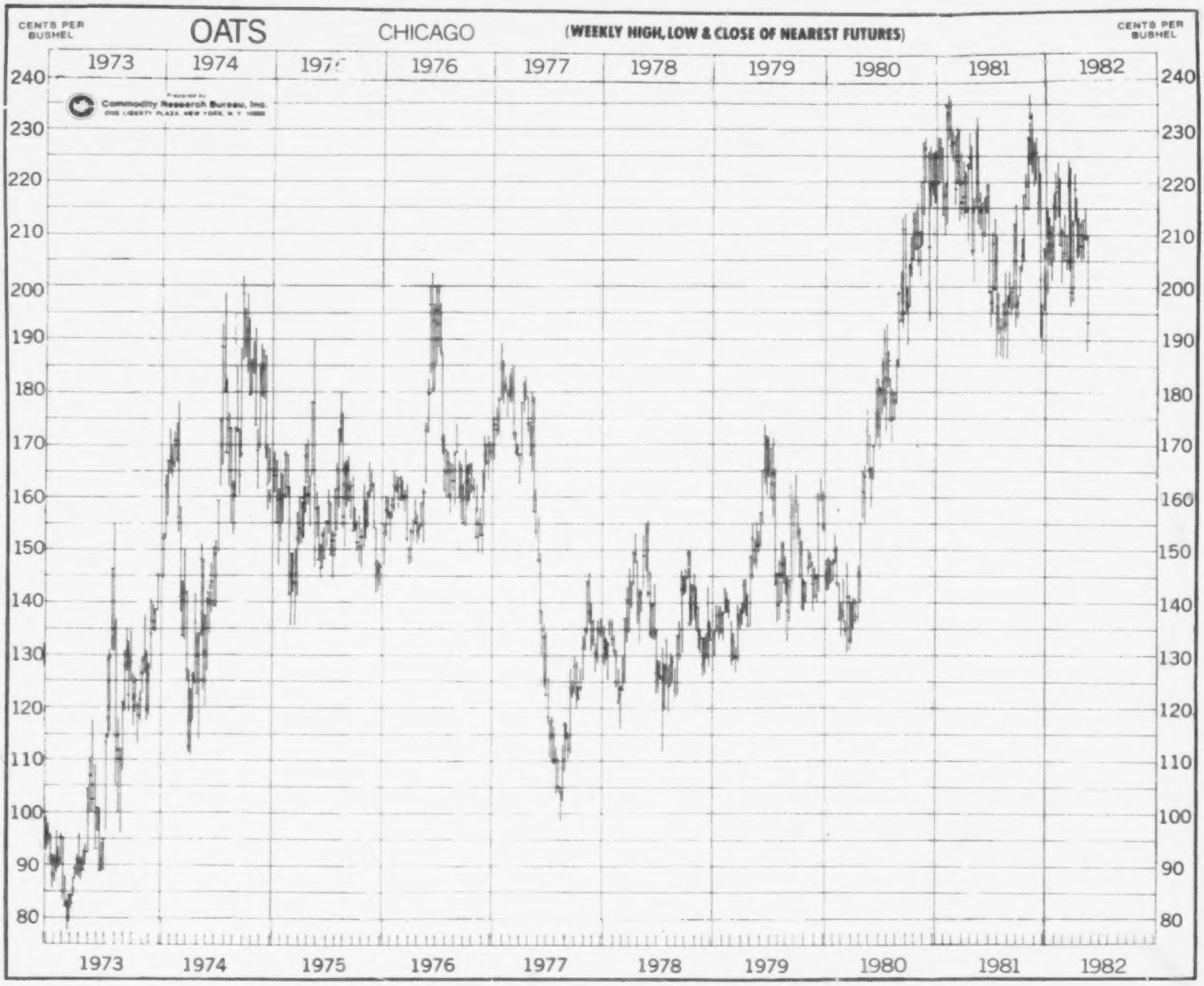
Year	Illinois	Indiana	Iowa	Michigan	Minnesota	Missouri	Nebraska	New York	No. Dakota	Ohio	Pennsylvania	So. Dakota	Texas	Wisconsin	California
1969	42.9	19.0	93.8	27.0	190.8	5.3	24.4	20.8	153.6	36.3	19.2	109.6	25.5	104.6	—
1970	34.3	14.6	94.1	27.1	167.7	9.2	24.3	23.3	120.1	31.7	22.5	102.3	29.0	106.3	—
1971	34.8	18.9	91.5	19.5	177.0	11.3	26.4	20.5	113.6	36.7	20.8	128.4	6.0	95.2	—
1972	27.7	12.1	71.3	17.6	126.9	6.9	19.1	12.6	105.6	22.4	17.4	98.0	9.7	74.3	—
1973	19.8	11.8	67.0	16.5	145.4	1.4	21.1	18.5	73.8	25.9	18.4	100.6	26.7	56.2	—
1974	23.1	10.1	78.4	19.3	101.0	4.0	25.1	20.7	44.1	29.5	20.3	81.1	8.1	85.4	—
1975	24.9	12.4	75.5	20.7	104.0	3.3	28.9	20.4	56.2	30.9	19.9	98.1	19.5	74.3	—
1976	22.4	10.2	82.6	19.6	94.8	5.4	27.7	17.3	44.8	28.5	18.1	42.6	14.4	55.0	—
1977	20.7	8.0	82.4	18.7	161.8	7.3	40.6	15.4	60.0	24.8	18.6	132.3	24.0	76.1	5.3
1978	15.4	7.3	60.9	23.4	98.8	1.3	21.2	17.7	62.6	20.7	18.0	95.8	13.8	62.7	3.8
1979	15.6	6.4	63.0	18.9	84.9	2.0	21.2	18.0	37.0	20.3	18.4	94.4	16.8	55.9	4.1
1980	14.0	5.9	62.0	20.1	82.7	2.0	15.6	17.9	13.5	19.4	19.0	66.0	12.6	58.7	4.3
1981[1]	13.5	5.5	59.5	21.1	90.1	4.6	15.4	17.9	44.2	17.0	20.0	70.5	18.9	52.6	3.6
1982															

[1] Preliminary. December estimate. *Source: Crop Reporting Board, U.S.D.A.*

Month End Open Interest of Oats at the Chicago Board of Trade & Winnipeg Grain Exchg.

Year	Chicago (In Millions of Bushels)												Winnipeg (In Contracts)			
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Mar.	June	Sept.	Dec.
1978	13.4	16.8	16.2	23.1	23.9	22.6	34.8	42.9	49.6	56.3	35.2	29.6	1,765	2,553	3,235	2,213
1979	31.1	32.8	24.4	29.8	25.4	28.8	27.0	32.2	29.2	28.6	26.2	25.8	2,515	2,778	3,085	2,635
1980	23.8	23.2	17.5	23.2	21.2	25.8	35.3	41.3	41.6	39.5	37.6	27.6	2,827	2,315	3,178	3,598
1981	36.2	36.7	27.0	25.2	27.8	29.7	25.3	23.9	29.0	45.6	42.4	34.6	3,295	2,625	2,203	1,863
1982	36.5	39.6	40.5	40.5									1,298			

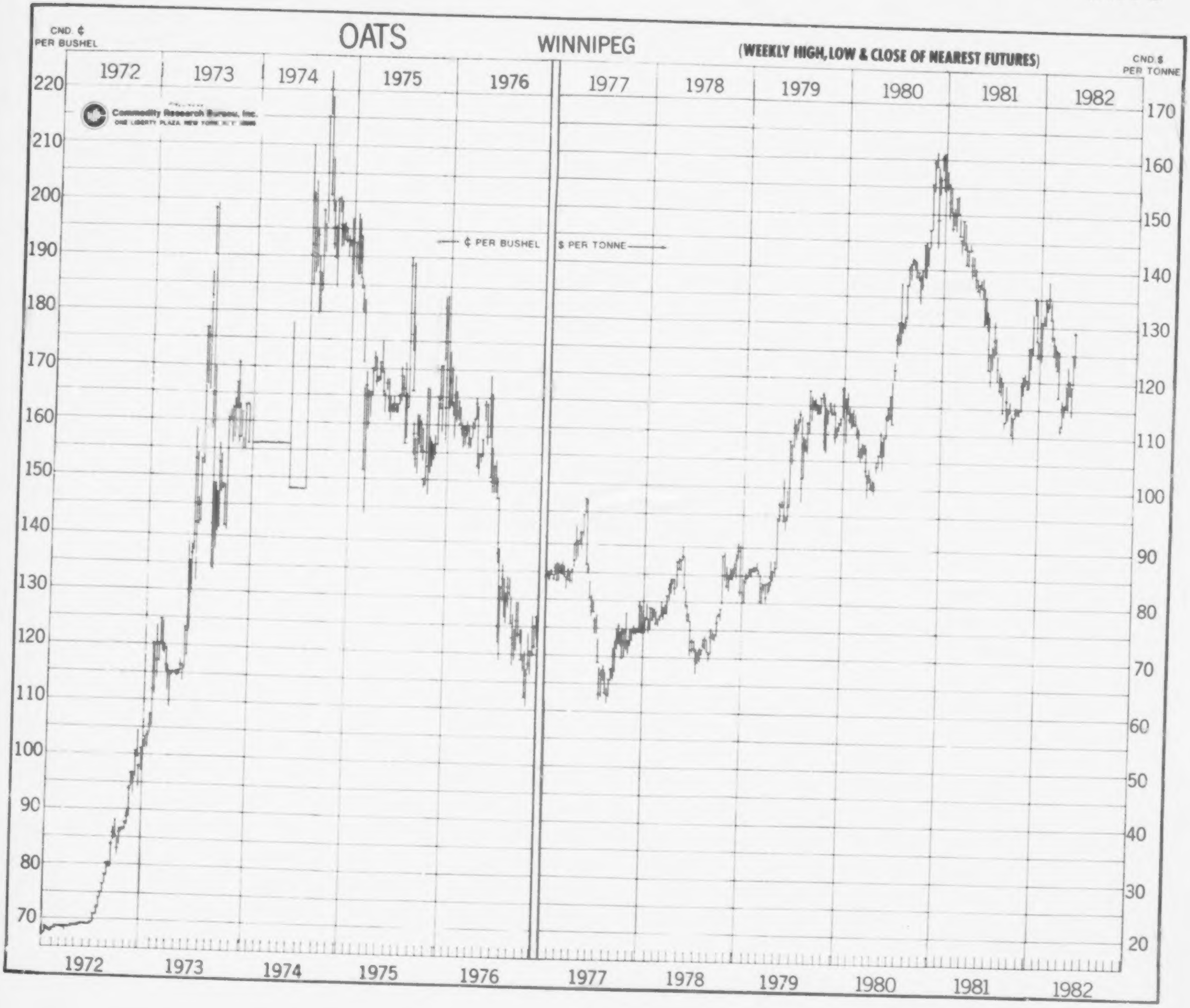
Source: Chicago Board of Trade & Winnipeg Grain Exch.



High, Low & Closing Priçes of the May Oats Futures at the Chicago Board of Trade In Cents per Bushel

Year of Delivery		Year Prior to Delivery								Delivery Year					Life of Delivery Range
		May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	
1978	High	—	—	136½	130	136¾	140	146	143	138¾	136½	146½	153¼	146½	153¼
	Low	—	—	120¾	115	127	129½	134	133	128	122	123	136	132¼	115
	Close	—	—	120¾	129½	133¼	134¾	140	138	135	122½	142	138	143	—
1979	High	172	163	154	148¼	155	162¼	158¾	152	147½	152½	142¾	144½	155	172
	Low	164	144	138	137½	144½	148½	146½	140½	137¼	137	133½	135½	138	133½
	Close	164	147¾	148½	145½	151½	155	148½	140½	142¾	137¾	137	138¼	148¾	—
1980	High	173½	196	189½	180¾	181	184½	172¼	172	169¾	162	153	147	171	196
	Low	169½	169¼	162¼	164	167	160	161	163¼	152½	144½	131	133¼	147	131
	Close	170½	184½	166	178	177¾	165¼	168	168¾	154¾	148	133¼	146½	168	—
1981	High	189	191	219½	217½	227	228	244½	244	232½	237	225¾	229½	232¼	244¼
	Low	181	179½	189	197½	207½	210	216½	210½	210½	212	206½	206	201	179½
	Close	183	189	212½	217	218	221	243½	226¾	216¼	224¼	223	213	224½	—
1982	High	231½	230	222½	217	194½	207	222½	212	209½	213¼	206	221¾		
	Low	226¼	212½	210	193	180½	185¼	197¾	177½	193¾	191½	186	202¾		
	Close	229½	215	216	194½	185¾	205¾	206	200¼	207¾	199	203¼	208		

Source: Chicago Board of Trade



Volume of Trading in Oats Futures at Chicago Board of Trade[1] In Millions of Bushels

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total
1969–0	43.0	51.3	57.8	66.3	55.8	58.0	42.9	37.3	31.3	34.0	27.1	31.2	536.0
1970–1	32.6	64.8	55.1	35.4	28.1	45.3	20.6	15.9	24.7	22.6	14.3	25.5	384.9
1971–2	21.2	19.1	15.7	17.7	15.9	15.4	17.0	14.2	16.1	23.0	12.3	8.0	195.6
1972–3	19.4	22.3	19.7	12.1	16.2	39.0	28.1	30.5	26.5	30.4	73.9	123.1	441.2
1973–4	134.1	173.0	106.7	108.5	449.9	70.0	75.6[1]	86.5	96.4	83.3	91.7	80.5	1,556.2
1974–5	86.5	106.4	86.8	71.6	59.5	59.4	73.9	57.2	54.7	69.9	82.9	64.3	873.1
1975–6	71.6	74.7	62.2	53.8	56.8	50.7	37.9	41.5	39.8	25.4	44.7	82.0	641.1
1976–7	95.0	72.9	64.5	44.1	44.5	32.2	39.3	39.5	41.6	44.9	41.8	54.2	614.5
1977–8	53.8	55.3	44.6	35.0	66.1	33.8	31.4	37.7	59.7	80.2	68.8	98.5	664.9
1978–9	103.8	121.3	120.0	149.0	141.0	67.7	59.3	93.9	51.6	95.4	87.1	135.7	1,225.3
1979–0	127.8	111.6	76.1	98.6	96.0	47.1	56.9	85.3	53.8	81.1	131.5	144.8	1,110.6
1980–1	200.4	183.9	199.6	197.1	167.9	151.0	124.8	170.2	129.2	136.4	120.5	162.2	1,943.2
1981–2	125.3	134.6	117.0	144.5	264.9	221.0	166.7	184.7	204.3	223.6			
1982–3													

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[1] Data prior to Jan. 1974 are for ALL CONTRACT MARKETS IN THE U.S. *Source: Chicago Board of Trade*

Olive Oil

World production of olive oil in 1981/82 was estimated at 1.30 million tonnes, the lowest in 12 years, according to the Foreign Agricultural Service (FAS) of the USDA and by the International Olive Oil Council (IOOC). The decrease of about 29 percent from estimated 1980/81 world production followed substantial production decreases in most major producing regions. The IOOC projected an 18 percent decrease in EEC production, a 54 percent decrease in Spanish production, and a 29 percent decrease in Tunisian production. The major decline in Spanish production was attributable to a severe drought, and to a substantial shift from the pressing of olives for olive oil to their use as table olives. This shift was influenced by a 1981 report attributing 147 deaths in Spain to tainted olive oil. Later investigations showed the deaths to have been caused by ingestion of mislabeled industrial rapeseed oil, but Spanish olive oil exports suffered nevertheless.

World olive oil exports were expected to drop in 1981/82, though not as drastically as production. World exports for 1981/82 were forecast at 241,000 tonnes, only 18 percent below the previous season. A drawdown in stocks in the major exporting countries was expected to compensate for the low 1981/82 production level. In Spain, olive oil stocks were expected to plummet to 10,000 tonnes from 200,000 tonnes the previous season.

World Production of Olive Oil (Pressed Oil)[2] In Thousands of Metric Tons

Crop Year[a]	Algeria	Greece	Italy	Jordan	Lebanon	Argentina	Morocco	Portugal	Spain	Syria	Tunisia	Turkey	Yugoslavia	Israel	World Total
1969–0	22	156	473	1	7	10	20	82	358	26	25	50	1	4	1,254
1970–1	13	186	429	1	3	21	15	82	475	15	90	110	1	1	1,430
1971–2	23	186	616	1	11	9	68	42	341	22	167	51	1	1	1,568
1972–3	15	249	340	6	7	28	21	48	440	33	70	154	1	2	1,422
1973–4	16	192	543	—	8	22	30	42	447	14	130	53	1	—	1,520
1974–5	8	237	433	7	14	19	26	48	333	44	117	110	2	—	1,414
1975–6	18	257	633	1	5	17	38	36	455	33	180	96	4	5	1,788
1976–7	15	224	301	5	12	12	30	36	390	56	85	150	4	—	1,334
1977–8	5	234	688	9	3	12	15	30	361	38	130	60	2	1	1,599
1978–9	14	240	419	10	10	10	26	40	500	66	83	160	2	1	1,585
1979–0	10	203	475	5	3	14	34	51	433	43	85	52	3	4	1,420
1980–1[1]	18	305	686	12	7	11	24	45	431	70	120	165	2	4	1,898
1981–2[3]		256	515						210	48	85	70			1,284
1982–3															

[1] Preliminary. [2] Total pressed oil in marketing year ending Oct. 31; excludes sulfur oil extracted from residues. [3] Forecast.
Source: Foreign Agricultural Service, U.S.D.A.

Wholesale Price of Olive Oil (Imported, Edible), in Drums at N.Y. In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1969	38.7	38.7	38.7	38.7	38.7	38.7	38.7	38.7	38.7	38.7	38.7	38.7	38.7
1970	38.7	38.7	40.3	40.7	40.7	40.7	40.7	40.7	39.3	39.3	39.3	39.3	40.0
1971	39.3	39.3	39.3	39.3	39.3	39.3	39.3	42.7	42.7	42.7	42.7	42.7	40.7
1972	42.7	42.7	42.7	42.7	42.7	42.7	42.7	42.7	42.7	42.7	42.7	42.7	42.7
1973	42.7	42.7	42.7	42.7	42.7	42.7	42.7	42.7	N.A.	54.5	90.0	86.7	51.3
1974	86.7	86.7	86.7	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	92.7	92.7	92.5	89.6
1975	110.7	116.7	116.7	116.7	116.7	116.7	116.7	112.0	116.7	N.A.	N.A.	N.A.	112.7
1976	103.3	103.3	103.3	103.3	103.3	103.3	103.3	103.3	86.7	86.7	86.7	86.7	97.8
1977	86.7	86.7	86.7	86.7	86.7	86.7	86.7	86.7	86.7	86.7	86.7	86.7	86.7
1978	86.7	86.7	86.7	86.7	86.7	86.7	86.7	86.3	83.3	83.3	83.3	83.3	85.4
1979	83.3	83.3	83.3	83.3	83.3	83.3	83.3	83.3	83.3	83.3	83.3	83.3	83.3
1980	62.5	78.1	83.3	83.6	85.6	87.1	85.5	86.3	87.5	86.5	87.5	87.5	83.3
1981	87.0	85.0	81.3	85.6	83.0								
1982													

Source: Economic Research Service, U.S.D.A.

Onions

Salient Statistics of Onions in the United States

Crop Year	Stocks—Jan. 1 (1,000 Cwt.) Common Storage	Cold Storage	Total Stocks	Acres Harvested	Yield Per Acre	Production	Price Per Cwt.	Farm Value	Domestic Exports[3]	Imports[3]	Per Capita[2] Consumption Farm Wt. (Lbs.)	Frozen
				Acres	Cwt.	1,000 Cwt.	Dollars	$1,000	1,000 Cwt.			
1969	5,301	214	5,515	100,000	282	28,234	4.13	107,450	1,514	837	12.5	.18
1970	4,351	185	4,536	101,000	302	30,493	3.67	98,752	1,398	500	11.9	.25
1971	5,470	180	5,650	98,800	302	29,803	3.88	105,330	1,269	590	10.1	.34
1972	4,810	170	4,980	94,470	300	28,355	6.48	167,715	1,340	1,458	9.9	.51
1973	3,961	77	4,038	104,990	283	29,689	7.57	207,226	1,773	1,079	9.2	.53
1974	4,754	81	4,835	109,730	302	33,151	4.87	147,182	1,553	909	10.5	.48
1975	5,109	80	5,189	103,080	305	31,418	9.35	266,230	3,169	696	9.8	.58
1976	4,430	89	4,519	109,520	322	35,288	6.93	217,202	3,169	1,403	10.1	.65
1977	5,156	98	5,254	108,550	319	34,583	6.76	204,313	1,941	1,345	10.1	.68
1978	5,680	63	5,743	121,920	297	36,174	7.81	251,495	2,164	1,582	10.6	.71
1979	6,556	66	6,622	123,910	312	38,602	6.98	237,432	1,851	1,304	11.8	.74
1980[1]	7,752	99	7,851	112,960	296	33,476	11.40	346,539			13.4	.68
1981[1]	6,235	78	6,313	111,630	316	35,242	14.90	472,106				
1982[1]	5,560	28	5,588									

[1] Preliminary. [2] Onions and shallots. Includes 0.1 pounds of shallots in each year. [3] Year beginning July.
Source: Economic Research Service, U.S.D.A.

Production of Onions in the United States In Thousands of Hundredweight (Cwt.)

Year	Spring Texas	California	Arizona	Total (All)[2]	Summer New Mexico	Texas	California	Colorado	Idaho	Michigan	Minnesota	New York	Oregon	Total (All)	Grand Total
1968	2,472	1,740	992	2,742	432	3,262	5,298	1,769	1,968	2,242	265	3,752	4,342	20,217	28,769
1969	3,045	1,652	750	2,402	368	2,942	5,896	1,760	1,684	2,010	225	3,762	2,134	19,928	28,234
1970	3,300	1,888	864	2,752	328	2,872	5,874	1,711	1,978	2,208	221	4,760	2,115	21,569	30,493
1971	3,420	1,508	570	5,498	300	2,875	7,142	1,475	4,281[3]	1,674	240	4,123	[3]	21,430	29,803
1972	2,975	1,881	645	5,501	285	2,846	6,452	1,709	2,184	2,144	252	2,300	3,392	20,008	28,355
1973	3,120	1,512	768	5,400	1,073	1,820	6,384	1,392	2,475	2,046	271	2,992	3.927	24,259	29,689
1974	3,570	1,809	820	6,199	1,122	1,586	8,580	1,479	2,070	2,139	281	3,973	3,576	26,846	33,151
1975	2,975	1,587	686	5,248	1,005	1,404	9,180	1,643	2,025	1,768	165	3,443	3,567	26,170	31,418
1976	4,800	1,652	720	7,172	1,340	1,881	7,215	2,183	2,915	2,166	172	3,631	4,433	28,025	35,197
1977	2,789	1,967	616	5,372	1,040	1,870	8,453	2,040	2,412	2,095	218	4,057	4,287	29,034	34,406
1978	3,345	1,590	738	5,673	1,184	1,502	8,250	2,730	2,470	2,448	223	4,309	4,187	30,263	35,936
1979	3,504	1.904	536	5.944	960	1,520	9,504	2,535	2,295	2,686	125	4,818	4,776	32,658	38,602
1980	3,569	1,683	623	5,875	1,131	1,764	6,000	2,460	2,453	1,800	201	4,433	4,538	27,601	33,476
1981[1]	2,700	2,160	512	5,372	1,242	1,488	7,571	2,925	2,448	2,446	199	3,933	4,262	29,870	35,242
1982[1]	3,492														

[1] Preliminary. [2] Total "Spring" after 1971. Prior add "Texas" for total Spring. [3] Includes "E. Oregon."
Source: Crop Reporting Board, U.S.D.A.

Cold Storage Stocks of Onions (Fresh) in the United States In Thousands of Pounds

Year	Jan. 1	Feb. 1	Mar. 1	April 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1969	21,397	24,261	21,899	17,084	5,650	2,606	1,642	716	390	2,521	8,481	15,772
1970	18,467	18,797	14,872	5,541	969	2,220	1,694	722	893	5,849	13,305	15,420
1971	18,018	19,340	15,053	7,685	2,359	862	1,436	680	558	3,368	10,638	11,729
1972	17,032	16,135	13,526	8,924	1,961	1,339	416	421	666	3,118	6,848	8,911
1973	7,685	8,326	6,003	3,797	359	740	403	690	781	1,798	6,534	8,446
1974	8,061	9,510	6,617	2,952	635	870	521	315	323	3,378	6,296	8,572
1975	8,142	6,807	3,937	3,291	1,865	1,884	538	277	290	3,456	7,214	9,122
1976	8,886	7,632	5,569	2,087	2,005	2,172	4,187	2,271	2,332	837	4,563	8,586
1977	9,829	8,611	8,824	5,034	905	603	537	44	884	2,766	3,922	7,285
1978	6,336	3,981	1,744	1,360	1,127	954	538	2,159	2,607	1,535	3,656	5,201
1979	6,584	6,023	5,400	2,967	2,107	1.254	844	800	253	1,747	1,487	4,298
1980	9,913	8,446	6,430	4,070	1,124	442	1,967	954	1,298	2,089	2,265	4,901
1981[1]	7,777	6,972	4,422	3,730	1,247	591	1,828	649	143	719	665	3,219
1982[1]	3,474	3,963	3,319	1,712								
1983												

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

ONIONS

World Production of Onions In Thousands of Metric Tons

Year	Brazil	Egypt	India	Italy	Japan	South Korea	Mexico	Netherlands	Poland	Romania	Spain	Turkey	Yugoslavia	United States	U.S.S.R.	World Total
1976	430	652	2,206	496	1,123	131	280	355	332	321	860	760	322	1,597	1,135	14,059
1977	489	723	2,164	518	1,120	159	306	590	367	358	1,195	845	375	1,561	1,016	15,336
1978	462	599	2,250	520	1,114	165	332	522	431	400	930	880	343	1,630	1,400	15,624
1979	691	560	2,100	487	1,254	393	343	457	334	380	930	1,000	293	1,462	1,400	15,732
1980[1]	685	580	2,400	478	1,112	275	315	413	350	370	921	1,100	280	1,329	1,200	15,278
1981																

[1] Preliminary. *Source: Foreign Agricultural Service, U.S.D.A.*

Average Wholesale Price of Onions at Chicago[1] In Dollars Per Hundred Pounds (CWT)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1969	4.28	3.90	3.20	4.28	4.09	5.20	6.83	5.75	5.74	5.31	6.43	6.33	5.11
1970	6.81	8.69	7.77	7.04	5.89	6.40	6.94	5.60	4.43	4.53	4.02	4.62	6.06
1971	4.29	4.94	6.54	7.11	5.26	5.97	6.50	7.24	5.35	6.06	5.75	5.51	5.88
1972	6.16	6.20	5.10	5.69	6.75	8.58	12.03	11.88	9.33	7.31	9.50	8.38	8.08
1973	9.69	11.31	19.75	33.00	21.33	11.50	11.20	9.19	3.30	3.92	4.33	4.31	11.90
1974	5.03	6.05	4.16	3.79	4.03	7.81	8.63	9.83	9.19	7.80	7.04	5.97	6.61
1975	5.46	4.85	9.16	16.13	14.75	15.63	27.83	20.08	13.00	10.80	10.69	14.43	13.57
1976	15.05	11.50	9.21	12.17	13.20	12.50	8.75	8.67	8.14	7.92	7.38	8.71	10.27
1977	11.00	16.46	21.75	23.70	17.67	12.67	12.50	13.00	8.65	8.13	8.08	8.13	13.48
1978	7.47	7.44	13.08	17.25	9.67	12.92	14.56	14.25	10.50	9.58	9.56	10.56	11.40
1979	9.44	15.08	11.75	10.25	12.50	19.50	20.65	14.05	11.10	9.31	8.54	7.15	12.44
1980	7.75	7.04	6.75	9.00	20.00	20.50	14.63	13.50	13.50	12.67	11.25	14.70	12.61
1981	18.17	20.00	25.75	30.00	28.50	32.00	22.17	22.50	24.00	14.21	17.20	16.92	22.62
1982	21.44	19.79	16.88										
1983													

[1] All yellow, all varieties, fair to good quality, U.S. No. 1, all sizes and field run, track and street sales.
Source: Bureau of Labor Statistics (0113–0216)

Average Price Received by Farmers for Onions in the U.S. In Dollars Per CWT.

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Season Average
1969	2.83	2.41	2.51	2.92	3.55	3.68	4.68	4.30	4.19	4.20	4.45	4.68	4.13
1970	6.36	6.95	6.82	6.41	4.71	5.15	4.98	3.88	3.29	3.10	3.04	2.94	3.67
1971	3.40	3.14	3.52	3.73	3.79	4.18	4.43	4.87	4.39	4.66	4.27	4.65	3.88
1972	4.64	4.08	3.85	4.49	5.48	6.62	8.21	8.17	6.91	6.33	6.53	6.91	6.48
1973	9.43	11.90	17.50	23.70	13.00	8.51	7.39	6.23	5.57	5.97	6.97	7.23	7.57
1974	10.40	10.50	6.30	4.85	4.79	5.24	6.07	7.11	6.34	5.39	4.57	4.27	4.87
1975	3.90	4.61	7.59	12.30	10.60	12.70	17.70	14.20	11.70	9.72	9.80	11.50	9.35
1976	11.10	8.85	6.95	7.20	6.17	5.49	5.65	5.38	5.73	5.34	5.51	6.97	6.93
1977	11.50	14.00	19.40	19.40	10.40	9.00	8.57	6.88	6.40	6.49	6.39	5.50	6.76
1978	4.95	4.76	7.79	12.10	7.50	7.64	9.85	9.14	7.13	6.44	7.05	9.53	7.81
1979	11.00	12.20	9.57	9.70	8.10	11.40	13.30	9.74	7.93	6.45	6.27	5.57	69.8
1980	4.50	4.20	5.30	6.83	9.86	10.70	9.20	10.40	11.30	10.90	11.50	14.20	11.40
1981[1]	15.40	17.20	23.50	25.40	23.00	18.00	18.30	16.80	11.80	12.90	15.00	15.00	14.90
1982[1]	18.40	18.10	13.40	12.60									
1983													

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

Oranges and Orange Juice

The 1980/81 (December/November) season Florida orange crop totaled 172.4 million boxes, 17 percent below the record-large 206.7 million boxes produced in the 1979/80 season, due to the January 1981 freeze.

The net pack of FCOJ in Florida for the 1980/81 season totaled 174.5 million gallons, sharply below the record production of 231.2 million gallons in the previous season. The final 1980/81 FCOJ yield per box was 1.21 gallons (43.4 degrees Brix) vs. 1.34 gallons in 1979/80 (45 degrees Brix).

Imports of FCOJ increased sharply in 1980/81 to about 57 million gallons from about 16.5 million gallons in 1979/80. Florida processors in calendar 1980 exported 11.4 million gallons of FCOJ at 45 degrees Brix, about the same as in the previous year. Canada continued as the largest importer of U.S. frozen concentrated orange juice.

FCOJ movement during the 1980/81 season amounted to about 229 million gallons versus 233 million in the previous season, and carryover at the end of November 1981 amounted to about 69 million gallons (42 degrees Brix), compared with 57.3 million gallons a year earlier. (The Brix level was reduced to 42.0 degrees from 43.3 degrees, effective at the start of the 1981/82 packing season, and the change would lead to an additional pack.)

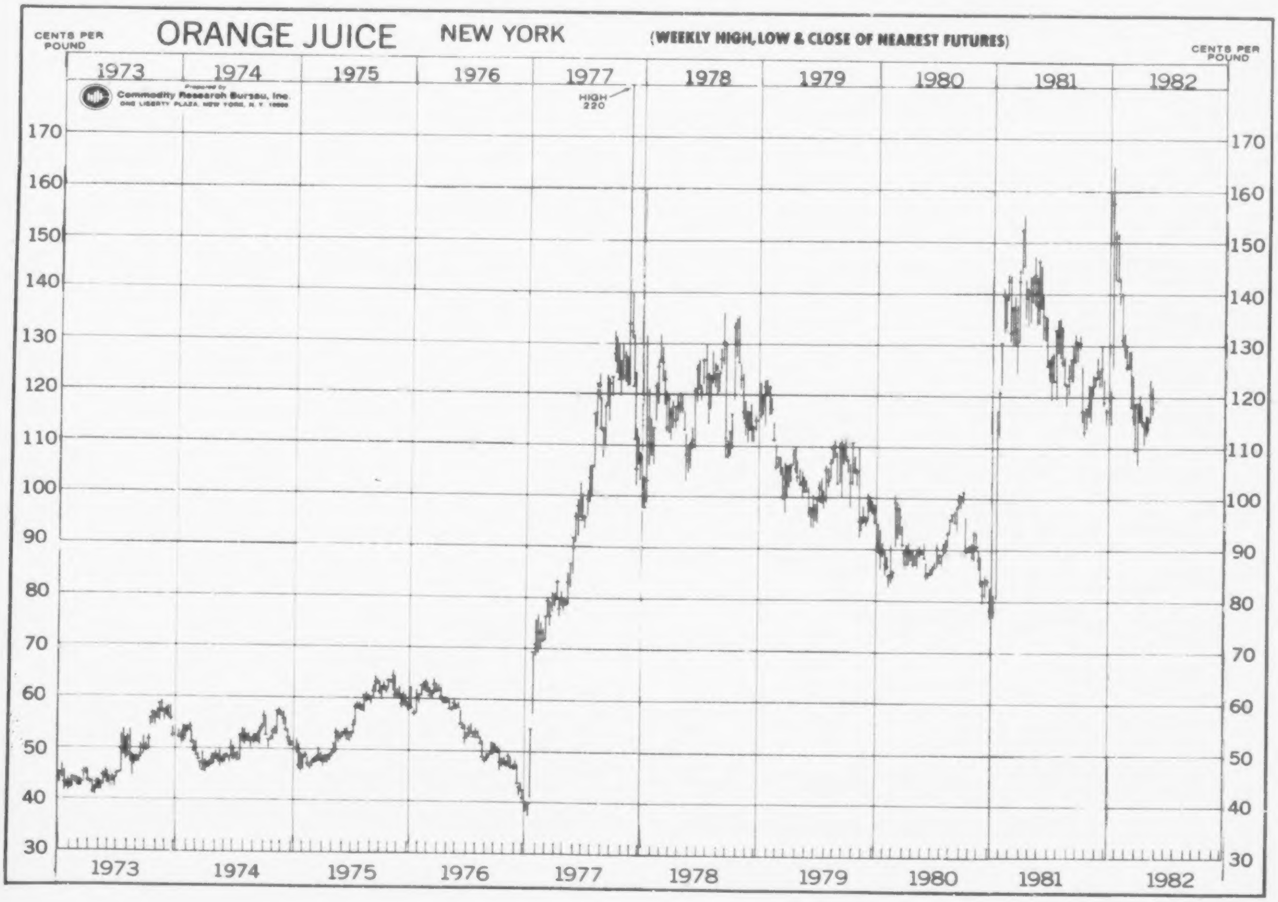
A hard freeze hit the Florida citrus belt again on the morning of January 12, 1982. As a result, Florida's orange crop prospects dropped 16 percent from the January USDA estimate, to 136 million boxes (excluding Temples) and 21 percent below the previous season's production. The April 1982 USDA estimate dropped to 130 million boxes. The FCOJ yield factor was estimated at 1.28 boxes per gallon, considerably below the January 1982 USDA estimate of 1.41 gallons. The 1981/82 FCOJ pack potential was reduced to around 145 million gallons by the January 1982 Florida freeze.

In response to the January 1982 freeze, canners' list prices for unadvertised brands of FCOJ rose from a pre-freeze level of $3.95 per dozen 6-ounce to $4.45 before dipping to $4.25 on March 1, and then to $3.95 per dozen cans.

Brazil sold a large amount of FCOJ to the U.S. immediately following the freeze, and U.S. imports for the season were expected to total around 65 million gallons versus about 57 million in the 1980/81 season.

Futures Market

Frozen concentrated orange juice (FCOJ) futures are traded on the Citrus Associates of the New York Cotton Exchange.



ORANGES AND ORANGE JUICE

World Production of Oranges (Including Tangarines) In Thousands of Metric Tons

Season	Algeria	Argentina	Brazil	Australia	Greece	Israel	Italy	Japan	Mexico	Morocco	Spain	Turkey	South Africa	United States	World Total
1970–1	451	1,255	2,132	315	421	1,076	1,599	2,994	1,405	753	2,005	513	481	7,875	24,715
1971–2	510	976	2,760	376	390	1,148	1,766	2,885	1,114	821	2,179	535	567	7,889	25,529
1972–3	515	1,032	2,872	338	400	1,221	1,604	4,070	1,270	988	2,642	563	534	9,245	28,932
1973–4	520	1,063	3,782	369	422	1,233	1,891	3,864	1,089	819	2,460	554	545	8,931	29,333
1974–5	480	1,014	4,065	438	539	1,016	2,098	3,952	1,110	583	2.479	622	499	9,913	30,660
1975–6	480	958	4,065	389	567	995	1,931	4,234	905	552	2,643	645	564	10,170	30,918
1976–7	506	990	3,754	391	533	968	2,258	3,575	1,283	784	2,489	671	463	10,144	30,567
1977–8	508	990	4,321	352	455	949	1,950	4,120	750	1,070	1,914	785	600	9,268	28,479
1978–9		925	6,471	451	506	992	1,959	3,637	1,398	827	2,526	806	600	8,310	24,050
1979–0		921	9,282	448	360	943	2,104	3,945	1,810	1,024	2,597	835	565	10,734	38,502
1980–1[1]		1,015	9,323	413	561	810	2,055	3,229	1,720	965	2,594	810	569	9,547	36,234
1981–2[2]					729	977	2,078	3,428	1,996	940	2,117	835			

[1] Preliminary. [2] Estimate. *Source: Foreign Agricultural Service, U.S.D.A.*

Salient Statistics of Oranges in the United States

Season	Production[2]					Farm Price $ Per Box	Farm Value Million $	Foreign Trade[3]		Quantities Processed	Florida Crop Processed					Yield Per Box (Gall.)
	Arizona	California	Florida	Texas	Total			Domestic Exports	Imports		Frozen Concentrates	Chilled Pdt's Juice	Chilled Pdt's Sections & Salads	Other Processed	Total Processed	
	Million Boxes							Million Boxes								
1971–2	4.9	43.4	137.0	6.2	191.5	2.87	549.4	7.7	1.1	148.0	104.4	19.5	.5	7.7	132.2	1.29
1972–3	5.1	42.1	169.7	7.8	224.7	2.69	603.3	7.1	1.2	182.3	132.2	20.5	.6	8.9	162.3	1.33
1973–4	3.4	40.4	165.8	6.6	216.2	2.78	600.7	8.2	1.1	171.3	132.5	20.4	.6	7.5	161.0	1.30
1974–5	5.0	55.1	173.3	4.5	237.8	2.75	653.8	12.6	.9	183.5	135.5	22.8	.5	7.6	166.4	1.31
1975–6	2.7	52.8	181.2	6.1	242.8	2.80	678.7	11.6	.5	192.5	144.5	24.0	.6	7.6	176.7	1.29
1976–7	4.0	45.3	186.8	6.9	243.0	3.34	811.2	10.7	1.1	195.8	148.7	27.3	.4	8.8	185.2	1.07
1977–8	2.6	42.6	167.8	6.1	220.1	5.45	1,198.7	8.9	.6	175.5	132.2	25.3	.4	8.1	166.0	1.23
1978–9	2.9	37.3	164.0	6.4	210.6	6.15	1,296.0	7.8	.6	170.4	130.2	22.8	.3	6.5	159.8	1.34
1979–0	3.5	59.4	206.7	4.0	273.6	4.76	1,304.2	12.1	.4	219.4	174.9	24.4	.3	7.0	206.6	1.34
1980–1[1]	2.6	66.3	172.4	4.3	245.6	4.85	1,327.7				144.3	17.7	2.1	7.3	171.5	1.21
1981–2[1]	2.8	49.0	136.0	6.0	193.8	5.54	1,361.4									1.28

[1] Preliminary. [2] Fruit ripened on trees, but destroyed prior to picking is not included. [3] Year beginning Nov. 1.
Source: Economic Research Service, U.S.D.A.

U.S. Cold Storage Stocks of Orange Juice Concentrate[2] In Millions of Pounds (Gallon Equivalent)

Year	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1971	323.7	462.8	573.3	581.6	574.5	642.9	684.3	603.1	535.4	450.5	347.3	262.2
1972	289.4	391.7	484.6	540.7	578.3	688.6	764.5	748.8	646.9	528.3	437.0	343.0
1973	353.5	468.5	633.7	768.8	830.6	909.5	1,074.6	1,089.1	999.1	829.8	709.6	598.1
1974	641.9	779.1	935.9	1,025.9	1,121.4	1,239.9	1,319.7	1,228.9	1,031.7	917.8	737.4	616.9
1975	654.6	802.1	967.3	985.4	1,032.1	1,246.8	1,294.0	1,153.4	981.7	856.6	696.7	633.2
1976	756.6	943.0	1,046.9	1,016.1	1,075.8	1,203.7	1,339.9	1,229.1	1,075.4	877.1	740.3	605.2
1977	613.6	681.4	845.5	932.8	955.5	1,040.6	914.3	806.5	647.1	551.7	456.3	333.3
1978	392.8	511.5	617.1	617.3	744.4	854.7	883.1	811.6	720.2	549.6	485.4	359.8
1979	506.5	762.3	996.6	995.0	1,044.4	1,186.5	1,228.4	1,116.4	926.2	704.6	560.1	466.6
1980	559.0	827.2	1,062.5	1,124.8	1,221.4	1,429.7	1.500.3	1,369.3	1,182.4	963.7	842.7	679.5
1981[1]	722.4	907.1	1,053.2	1,180.1	1,264.4	1,502.2	1,491.3	1,307.8	1,178.8	1,022.2	892.2	759.1
1982[1]	753.1	957.0	1,172.3	1,307.3								

[1] Preliminary. [2] Adjusted to 45° BRIX basis (10.027 lbs. per gallon). *Source: Crop Reporting Board, U.S.D.A.*

Volume of Trading of Frozen Concentrated Orange Juice Futures In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	32,409	25,867	29,847	16,858	23,331	26,682	23,252	20,257	25,430	28,087	20,121	12,264	284,405
1979	25,080	17,387	15,162	11,378	11,661	15,526	14,326	16,014	15,010	15,141	12,889	15,239	184,813
1980	21,982	13,010	22,555	9,337	6,742	7,914	8,308	9,715	11,800	16,276	13,042	22,183	162,864
1981	35,041	32,755	49,107	39,785	32,611	35,459	32,944	29,979	22,927	25,435	19,747	31,392	387,182
1982	28,968	25,524	27,139	17,038									

Source: Citrus Assoc. of the N.Y. Cotton Exch.

Wholesale Price of Oranges (California) F.O.B. Packed Fresh In Dollars Per Box

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1973	7.30	7.30	7.78	7.64	6.44	6.15	6.60	6.60	7.70	7.40	7.57	7.50	7.17
1974	7.65	7.54	6.64	7.35	7.29	6.85	7.10	7.40	7.95	11.81	8.08	7.29	7.75
1975	7.30	7.54	7.33	7.48	6.93	7.10	6.93	7.04	7.63	7.11	8.60	8.66	7.47
1976	7.60	6.70	6.35	6.23	6.18	6.57	6.91	7.00	7.60	7.76	9.96	8.47	7.28
1977	7.00	7.50	7.28	7.38	7.11	7.88	7.70	8.78	9.10	9.70	12.70	11.30	8.62
1978	11.90	11.20	10.54	9.37	9.97	10.10	10.70	13.40	14.50	14.30	13.50	13.50	11.91
1979	13.50	12.29	13.68	13.19	13.58	15.98	13.50	12.40	12.40	11.00	11.60	10.70	12.82
1980	9.72	9.72	10.60	9.54	9.21	9.39	9.52	9.52	9.50	9.54	13.40	11.60	10.11
1981	10.90	10.80	9.99	9.35	9.76	10.50	12.20	12.80	12.30	12.00	13.60	11.80	11.33
1982	12.50	13.60											

Source: Economic Research Service, U.S.D.A.

Wholesale Index Price of Frozen Orange Concentrate[1] Index 1967 = 100[2]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1973	2.159	2.159	2.159	2.159	2.106	2.159	2.106	2.106	2.106	2.159	2.159	2.159	2.141
1974	2.167	2.152	2.152	2.152	2.152	2.152	2.151	2.151	2.170	2.195	2.134	2.154	2.157
1975	2.244	2.254	2.254	2.254	2.254	2.254	2.246	2.246	2.246	2.358	2.383	2.383	2.281
1976	2.383	2.352	2.352	2.383	2.383	2.383	2.187	2.187	2.187	2.187	2.187	2.089	2.272
1977	2.040	2.776	2.752	2.752	2.752	2.910	2.910	3.101	3.223	3.223	3.459	3.508	2.951
1978	3.508	3.508	3.514	3.514	3.514	3.514	3.514	3.514	3.514	3.514	3.649	3.787	3.547
1979[2]	260.2	260.2	260.2	260.2	260.2	260.2	260.2	260.2	260.2	260.2	260.2	260.2	260.2
1980	260.2	260.2	260.2	254.3	254.3	249.2	249.2	249.2	249.2	249.2	236.5	236.5	250.7
1981	231.8	280.2	312.2	338.1	338.1	338.1	338.1	338.1	335.5	334.0	323.4	313.8	318.7
1982	312.9	328.8	336.4										

[1] Packer to wholesale distributor, or retail chain store, f.o.b. plant. [2] Prior to 1979 prices are in $ per dozen 6 oz. cans.
Source: Bureau of Labor Statistics (0242–0301.99)

High, Low & Closing Prices of May Orange Juice[1] Futures at New York In Cents per Pound

Year of Delivery		Year Prior to Delivery										Delivery Year					Life of Delivery Range
		Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	
1978	High	75.30	76.00	86.00	90.10	96.00	100.00	113.25	125.25	135.00	121.90	115.50	129.00	128.65	120.25	119.90	135.00
	Low	67.55	69.50	76.00	82.60	83.80	88.80	88.60	107.50	118.60	102.40	98.00	107.60	111.40	113.55	106.65	44.50
	Close	69.80	76.00	85.95	84.40	95.65	90.50	108.75	121.60	120.50	107.50	108.60	122.65	116.50	118.20	106.65	—
1979	High	98.65	89.75	88.40	92.75	95.70	95.75	100.65	129.00	128.80	121.80	127.55	124.60	109.80	110.00	106.10	129.00
	Low	85.25	86.10	80.15	84.50	88.90	91.50	95.25	95.70	115.00	115.00	118.60	106.40	100.10	102.30	100.00	80.15
	Close	89.30	86.60	84.25	89.00	91.90	95.60	96.20	129.00	116,25	120.80	121.70	107.25	106.25	106.20	101.35	—
1980	High	104.60	104.00	102.00	101.50	102.00	109.80	109.90	111.25	100.00	102.00	100.00	91.00	101.20	91.50	89.20	111.25
	Low	94.50	96.75	97.90	92.70	95.00	102.00	101.60	97.50	95.10	97.25	87.00	83.70	88.00	86.70	86.50	83.70
	Close	98.90	100.75	101.30	95.80	102.00	108.70	109.50	98.70	98.50	97.90	89.65	86.15	88.70	88.80	87.55	—
1981	High	107.80	94.75	95.50	96.90	94.55	97.50	103.00	104.45	96.15	92.20	133.50	149.50	150.20	155.10	143.50	155.10
	Low	91.35	91.50	92.80	90.60	91.10	93.45	96.80	92.45	90.25	83.30	84.00	135.25	126.80	133.70	138.00	83.30
	Close	91.35	93.00	94.40	91.10	93.20	97.50	102.20	95.00	91.80	85.00	133.35	138.40	150.20	139.60	138.35	—
1982	High	149.50	151.50	150.95	149.40	144.75	145.90	140.00	139.50	129.30	133.50	156.90	146.40	133.00	120.50		
	Low	136.00	140.25	144.80	138.75	134.00	134.00	134.25	120.00	122.30	119.00	119.50	129.00	106.75	110.90		
	Close	146.45	148.45	150.70	138.75	142.90	137.25	136.95	126.10	127.70	122.55	146.20	130.30	115.10	113.30		
1983	High	142.85	130.20														
	Low	122.00	121.95														
	Close	127.50	126.50														

[1] Frozen concentrated orange juice. *Source: Citrus Associates of the N.Y. Cotton Exch., Inc.*

Month End Open Interest of Frozen Concentrated Orange Juice Futures In Thousands of Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	8,973	10,002	10,611	11,980	12,381	12,878	11,964	13,950	12,781	12,878	9,212	9,073
1979	7,916	8,503	6,734	7,887	7,223	8,261	8,058	8,116	6,510	7,101	8,423	10,428
1980	7,612	6,501	6,126	6,390	6,210	5,923	6,186	6,920	8,046	9,063	9,239	9,582
1981	7,980	10,787	12,018	11,354	11,667	11,925	10,675	9,751	9,454	7,991	7,654	8,037
1982	9,519	8,634	6,580	6,238								

Source: Citrus Assoc. of the N.Y. Cotton Exch.

Palm Oil

World palm oil production for 1981 was estimated by the USDA at nearly 5.0 million tonnes, up 6 percent from the previous year. The USDA forecast 1982 production at 9 percent above the 1981 level. The continued increases in world production were led by the world's largest producer and exporter, West Malaysia. Production of palm oil in West Malaysia for 1981 was estimated by the USDA at 2.75 million tonnes, up 7 percent from 1980. (The USDA forecast 1982 Malaysian production at 9 percent over 1981 production.)

World production of palm oil in 1981 showed the smallest gain since 1978. As a result of the relatively slow growth in production, world exports declined. In response to tight supplies to the first half of the year, prices rose somewhat, but began to decline in the second half as production grew. Malaysia continued its active market development activities in Asia, Europe, and the USSR. Malaysia accounts for about 70 percent of world exports.

World Palm Oil Statistics In Thousand Metric Tons

	Production									Exports							
Year	Malaysia	Colombia	China	Indonesia	Ivory Coast	Sabah	Zaire	Nigeria	Total	Malaysia	Indonesia	Ivory Coast	Sabah	Singapore	Zaire	Papua N. Guin.	Total
1974	942	51		351	140	88	174	491	2,605	870	282	102	88		66		1,461
1975	1,137	47		411	146	116	165	500	2,875	1,032	386	114	128		53		1,793
1976	1,261	40		434	151	131	155	500	3,059	1,207	406	92	128		40		1,927
1977	1,613	52	81	497	135	129	150	510	3,476	1,427	421	79	124	277	21	27	2,393
1978	1,786	51	87	525	150	146	137	515	3,713	1,514	412	82	144	299	10	28	2,481
1979	2,189	71	93	600	150	155	98	500	4,182	1,901	438	50	155	492	—	35	3,091
1980	2,576	74	100	691	160	180	93	520	4,706	2,260	455	88		679	10	38	3,755
1981[1]	2,750	78	106	722	180	203	88	535	4,990	2,345	230	80		450	8	43	3,392
1982[2]	3,000	80	112	790	200		83	550	5,375	2,510	235	88		500	5	48	3,617
1983																	

[1] Preliminary. [2] Projected. *Source: Economic Research Service, U.S.D.A.*

Palm Oil—U.S. Supply & Distribution In Millions of Pounds

	Supply			Utilization								Prices		
				Food Uses										
Year Begin. Oct.	Imports	Stocks Oct. 1	Total Supply	Shortening	Margarine	Salad or Cooking Oil	Other	Total	Non Food Uses	Total Disappearance	Exports (& Shipments)	Value of[2] Imports	U.S. Ports C.I.F.	Malaysia, 5% Bulk, CIF Europe
												¢ Per Pound		
1972–3	363	93	456	299	7	9	29	344	12	356	40	9.7	12.3	13.9
1973–4	346	60	406	260	1	3	20	285	12	297	24	20.1	22.2	26.8
1974–5	757	88	845	606	16	24	37	683	9	692	27	24.2	24.7	23.9
1975–6	933	127	1,060	699	52	77	11	839	44	883	39	16.2	18.1	17.7
1976–7	661	138	813	430	48	91	11	580	30	610	58	19.8	23.8	24.0
1977–8[1]	361	131	492	253	23	50	19	346	21	367	51		26.4	
1978–9[1]	277	74	351							265	12			
1979–0[1]	212	74	280							223	21			
1980–1[1]	324	42	242							299	9			
1981–2[1]		58												

[1] Preliminary. [2] F.O.B. importing countries. *Source: Economic Research Service, U.S.D.A.*

Average Wholesale Palm Oil Prices, CIF, Bulk, U.S. Ports In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1974	24.9	28.0	21.2	20.4	22.6	22.8	21.4	22.9	24.0	18.6	26.3	28.8	26.9
1975	31.2	27.5	28.1	28.9	24.6	23.0	20.6	21.1	18.2	22.4	19.0	17.2	22.8
1976[1]	16.8	16.4	17.0	16.0	15.9	17.4	19.5	19.0	19.7	19.4	19.4	19.6	18.1
1977	20.5	23.0	27.1	25.5	29.5	29.6	25.0	23.3	21.6	20.2	20.4	23.9	24.3
1978	23.1	25.2	27.4	28.0	28.4	30.6	31.2	28.5	29.8	30.5	30.4	31.0	28.7
1979	31.7	32.8	31.1	31.2	31.5	32.1	33.6	31.5	30.3	29.1	29.1	30.1	31.2
1981	27.5	28.3	25.5	27.5	27.6	N.A.	N.A.	25.0	24.7	N.A.	N.A.	N.A.	26.6
1982	N.A.	N.A.	24.0										

[1] Prior to 1976 prices are for CONGO, TANK CARS, F.O.B. N.Y. *Source: Economic Research Service, U.S.D.A.*

Paper

Total market pulp shipments by the U.S. pulp industry in 1981 were estimated to be only 1 percent below the 1980 level and the second highest volume in history, despite strong worldwide market competition and economic recession, especially in the major Western European markets and in Japan. Some 3.7 million tons, or 52 percent of 1981 market pulp shipments were exported, primarily to Europe, Mexico, Japan, and Korea. Yet, the U.S. remained a net importer of pulp, with about 95 percent of the estimated record-large imports coming from Canada. Producer inventories of pulp in the major producing countries built to a higher-than-normal level in 1981, and U.S. inventories at the end of 1981 were about 25 percent above the year-earlier level. Some price cutting was indicated in late 1981 as spot prices were lowered for some market pulps. With the International Monetary Fund (IMF) projecting weak growth in world industrial production 1982, world pulp demand could be adversely affected.

U.S. production of primary paper and board products increased to an estimated 65.5 million tons, representing a 2 percent recovery from the 1980 dip in output. Anticipated strikes in the Northwest industry did not occur. Operating rates were helped by stronger than anticipated export demand through much of first-half 1981, but demand eased in the face of the climbing exchange rate for the U.S. dollar and completion of a large liner board contract with China. Paper and board exports in 1981 were estimated at 4.4 million tons, almost 5 percent lower than the record figure posted in 1980. Imports of primary paper and board products in 1981 were estimated to have been about 2.5 percent smaller than in the previous year, mostly because of additions to U.S. capacity in newsprint and printing papers.

Production of Paperboard in the United States In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1969	2,093	2,025	2,236	2,156	2,221	2,180	2,029	2,151	2,047	2,228	2,150	2,033	26,069
1970	2,237	2,057	2,142	2,198	2,160	2,106	1,956	2,074	1,959	2,169	2,054	1,851	25,477
1971	2,175	2,053	2,266	2,195	2,203	2,235	2,044	2,256	2,137	2,341	2,190	2,026	26,136
1972	2,278	2,271	2,510	2,310	2,539	2,427	2,246	2,523	2,276	2,543	2,439	2,162	28,522
1973	2,480	2,324	2,588	2,470	2,606	2,491	2,314	2,577	2,290	2,630	2,493	2,197	29,267
1974	2,479	2,287	2,510	2,507	2,573	2,410	2,342	2,499	2,172	2,396	2,114	1,604	28,016
1975	1,838	1,855	1,858	1,891	1,989	1,953	1,885	2,140	2,146	2,434	2,223	2,077	24,452
1976	2,318	2,266	2,542	2,472	2,438	2,456	2,195	2,402	2,145	2,419	2,280	2,001	27,840
1977	2,309	2,238	2,572	2,469	2,578	2,529	2,227	2,544	2,309	2,484	2,340	2,127	29,006
1978	2,346	2,314	2,604	2,486	2,677	2,652	2,384	2,612	2,482	2,659	2,552	2,265	30,033
1979[1]	2,411	2,298	2,643	2,505	2,590	2,542	2,387	2,622	2,408	2,698	2,606	2,332	31,429
1980[1]	2,738	2,576	2,777	2,570	2,661	2,597	2,407	2,567	2,529	2,683	2,603	2,313	30,952
1981[1]	2,709	2,539	2,842	2,747	2,854	2,666	2,509	2,737	2,590	2,628	2,482	2,035	31,338
1982[1]	2,400												

[1] Preliminary. *Source: National Paperboard Association*

United States Production of All Woodpulp In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1969	3,249	3,049	3,418	3,433	3,603	3,536	3,329	3,558	3,379	3,647	3,594	3,263	42,813
1970	3,560	3,425	3,587	3,579	3,624	3,475	3,352	3,547	3,304	3,656	3,496	3,201	43,546
1971	3,600	3,347	3,696	3,699	3,712	3,679	3,450	3,805	3,593	4,072	3,808	3,499	43,903
1972	3,866	3,765	4,041	3,893	4,013	3,942	3,766	3,991	3,668	4,123	3,876	3,662	46,767
1973	4,054	3,743	4,217	3,983	4,189	4,058	3,928	4,181	3,849	4,165	4,104	3,748	48,327
1974	4,100	3,776	4,253	4,177	4,256	4,117	3,931	4,116	3,867	4,334	3,918	3,372	48,349
1975	3,727	3,401	3,221	3,076	3,215	3,208	3,171	3,569	3,396	3,919	3,724	3,371	43,084
1976	3,935	3,850	4,155	4,082	4,124	4,061	3,713	4,076	3,613	4,123	3,966	3,336	47,721
1977	3,753	3,850	4,112	3,999	4,148	4,083	3,791	4,026	3,668	4,054	3,884	3,489	49,132
1978	3,944	3,642	4,149	4,101	4,103	4,109	3,672	3,848	3,878	4,051	3,954	3,628	49,694
1979[1]	3,905	3,815	4,307	4,096	4,368	4,321	4,092	4,393	4,088	4,470	4,225	3,874	51,177
1980[1]	4,390	4,152	4,496	4,243	4,447	4,307	3,965	4,334	4,186	4,319	4,224	3,851	52,055
1981[1]	4,355	4,128	4,621	4,501	4,584	4,398	4.398	4,057	4,513	4,309	4,459	4,251	52,757
1982													

[1] Preliminary. *Source: Bureau of Census*

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Stocks of Woodpulp at All[1] Mills in the U.S., at End of Month In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1969	771	807	815	862	840	857	802	790	780	787	839	796
1970	812	811	823	832	868	867	919	904	821	872	885	917
1971	913	930	974	1,045	980	1,076	1,063	1,073	1,044	1,103	1,154	1,045
1972	1,077	1,026	1,017	1,014	954	943	907	914	866	862	839	848
1973	797	791	788	777	782	807	788	736	683	707	725	874
1974	702	686	737	745	744	764	793	792	749	816	697	1,177
1975	1,111	1,133	1,225	1,222	1,271	1,258	1,231	1,140	1,041	1,124	1,113	1,158
1976	1,076	1,083	1,032	1,101	1,106	1,215	1,126	1,081	1,051	1,053	1,133	1,372
1977	1,020	1,045	1,132	1,132	1,080	1,175	1,185	1,188	1,098	774	784	1,303
1978	1,051	1,062	1,090	1,074	1,069	898	1,014	1,048	993	999	788	1,080
1979[2]	858	802	834	907	939	896	884	892	781	813	834	798
1980[2]	850	843	867	922	976	971	982	1,034	960	960	1,042	944
1981[2]	1,031	1,107	1,035	1,077	1,088	1,154	1,224	1,287	1,141	1,267	1,342	

[1] At pulp mills, paper & board mills, & non-paper mills. [2] Preliminary. *Source: Bureau of the Census*

Shipments of (Paper Products) Shipping Containers[1] In Millions of Square Feet Surface Area

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1970	18,246	14,428	15,516	15,589	15,081	15,108	15,926	15,406	16,527	17,194	13,878	11,964	185,864
1971	14,415	14,223	16,261	16,001	14,916	17,192	15,470	16,412	17,144	17,280	16,653	15,866	191,832
1972	15,453	16,302	18,358	16,579	17,676	18,939	15,427	15,858	21,482	19,721	18,643	17,158	211,926
1973	18,037	17,591	20,428	18,526	20,074	19,702	16,818	19,914	18,720	21,775	19,450	17,016	228,052
1974	19,784	18,480	19,729	19,658	19,842	17,979	17,826	18,807	17,169	18,592	15,576	12,630	216,072
1975	14,689	13,768	14,742	14,541	16,151	15,612	16,023	17,006	18,580	20,053	16,017	16,145	194,329
1976	17,509	16,836	19,208	18,058	17,888	19,040	17,176	18,495	18,651	18,741	17,980	16,789	216,371
1977	17,156	17,086	20,607	18,498	19,467	20,139	16,997	20,372	19,674	19,923	19,343	17,936	227,197
1978	18,075	18,711	21,804	19,482	21,772	22,060	17,601	22,301	20,531	22,608	20,354	18,599	243,898
1979[2]	20,844	19,409	22,863	20,574	21,769	20,986	19,615	22,163	20,327	23,617	20,330	18,109	250,643
1980[2]	21,935	20,452	21,466	20,636	19,150	19,115	18,456	19,345	21,054	23,229	18,849	19,313	243,228
1981[2]	21,161	20,044	21,383	21,583	19,808	20,933	20,486	20,434	21,094	21,867	18,189	17,600	244,582
1982													

[1] Corrugated & solid fiber. [2] Preliminary. *Source: National Paperboard Association*

Salient Statistics of Newsprint in the United States and Canada In Thousands of Metric[4] Tons

	United States													Canada		
			Imports[5]—By Countries of Origin									Stocks, Dec. 31				
Year	Production	Exports	Canada	Finland	Italy	Norway	Sweden	U.K.	Others	Total	Consumption	At Mills	At Publishers[2]	Production	Exports	Stocks At Mills
1970	3,310	141	6,320	308	—	—	7	—	—	6,635	9,727	33	749	8,607	7,876	236
1971	3,296	161	6,564	303	—	—	—	—	14	6,881	9,829	41	705	8,455	7,490	332
1972[3]	3,656	122	6,772	328	—	—	—	—	0	7,101	10,547	27	544	8,820	8,120	251
1973	3,738	107	6,855	381	—	—	—	—	0	7,236	10,794	24	603	9,140	8,340	193
1974	3,561	103	6,949	213	—	—	—	—	—	7,162	10,284	23	827	9,548	9,075	143
1975	3,691	123	5,488	33	—	—	—	—	—	5,521	9,254	21	734	7,679	6,863	95
1976	3,736	95	6,251	57	—	—	—	—	—	6,308	9,611	29	921	8,915	7,827	299
1977[4]	3,512	117	5,751	0	—	—	—	—	—	5,751	9,279	31	722	8,154	7,345	282
1978	3,418	75	6,428	0	—	—	—	—	—	6,428	9,864	20	660	8,811	7,974	184
1979	3,685	65	6,372	—	—	—	35	—	97	6,504	10,197	16	628	8,756	7,809	162
1980	4,239	159	7,127	8	9	15	54	37	13	7,263	10,089	21	732	8,625	7,642	165
1981[1]	4,752	245	6,936	4	0	12	23	—	2	6,977	10,165	38	980	8,946	7,870	194

[1] Preliminary. [2] Reporting only to A.N.P.A.; group represents about 75%. [3] Beginning 1972 data is for 30 lb. basis. [4] Data prior to 1977 are in THOUSANDS OF SHORT TONS. [5] Data for imports are in thousands of short tons. *Source: Newsprint Service Bureau, A.P.I.*

U.S. Production & Consumption of Woodpulp, Pulpwood & Other Fibrous Materials in the Manufacture of Paper & Board In Thousands of Short Tons[6]

Year	Woodpulp Production													Consumption in the Manufacture of Paper and Board		
		Sulfite		Sulfate												
	Special Alpha[2]	Bleached	Unbleached	Bleached	Semi-Bleached	Unbleached	Soda	Groundwood	Semi-Chemical	Defibrated[3]	Screenings, Damaged, etc.	Total Wood Pulp		Wood Pulp[4]	Other Fibrous Materials[5]	Pulpwood[6]
1970	1,705	1,931	413	11,348	1,906	16,217	218	4,404	3,297	—2,105—		43,546		43,192	11,423	67,562
1971	1,674	1,809	354	11,684	1,557	16,309	208	4,462	3,473	—2,372—		43,903		44,148	11,875	67,157
1972	1,656	1,827	345	12,460	1,574	17,792	184	4,639	3,786	—2,502—		46,767		47,347	12,595	71,538
1973	1,637	1,810	374	13,055	1,826	18,165	188	4,670	3,864	—2,740—		48,327		48,772	13,257	73,596
1974	1,723	1,804	405	13,705	1,672	17,635	200	4,711	3,758	—2,736—		48,349		48,341	12,936	74,327
1975	1,583	1,594	357	12,448	1,396	15,369	N.A.	4,351	3,201	—2,785—		43,084		42,431	10,992	65,421
1976	1,443	1,599	435	13,696	1,298	17,784	N.A.	4,649	3,576	—3,242—		47,421		47,541	12,616	72,011
1977	1,401	—2,012—		14,384	1,244	18,436	N.A.	4,852	3,542	—3,226—		49,132		48,477	12,929	73,935
1978	1,415	—1,643—		15,218	1,198	18,693	N.A.	4,807	3,552	—3,233—		50,020		49,614	13,305	74,170
1979	1,447	—1,814—		16,763	N.A.	19,576	N.A.	4,619	3,889	N.A.		51,177		N.A.	13,739	77,362
1980[1]	1,417	—1,910—		17,561	N.A.	19,735	N.A.	4,887	3,938	N.A.		52,055		N.A.	13,185	79,703
1981[7]	1,375	—1,950—		18,000		19,600		5,000	3,850			53,500			14,000	79,000

[1] Preliminary. [2] Also includes dissolving grades. [3] Or exploded. [4] Does not include wood pulp consumption by plants classified outside paper & board industries. [5] Waste paper; straw; rags; cotton fibre; manila stock; etc. [6] Data for pulpwood expressed in thousands of cords of 128 cu. ft.—roughwood basis. Pulpwood includes slabs, chips, & millwaste. [7] Estimate.
Sources: Bureau of the Census; American Paper Inst.

U.S. Foreign Trade in Pulpwood, Wood Pulp, Paper, Paper Board & Paper Products
In Thousands of Short Tons

Year	Exports							Imports							
	Wood Chips	Wood Pulp	Waste Fibrous Mater.[3]	Paper	Paper Board	Construction P. & B.	Converted Paper & Board	Pulpwood Chips	Wood Pulp	Waste Fibrous Mater.	Paper	Paper Board	Construction P. & B.	Paper & BD. Products	Total Value of Imports Mill. $[4]
1971	1,926	2,175	419	549	2,377	65	156	1,202	3,515	113	7,268	17	293	33	1,638
1972	2,524	2,237	415	569	2,288	79	166	978	3,773	132	7,519	8	461	39	1,791
1973	3,466	2,344	683	601	2,129	98	231	1,254	3,993	133	7,928	33	452	57	2,177
1974	3,866	2,806	1,383	923	2,471	125	348	818	4,123	133	7,874	34	339	62	2,964
1975	3,177	2,565	861	947	1,808	115	301	626	3,078	134	6,118	8	176	39	2,678
1976	3,947	2,518	1,273	928	2,134	128	333	1,051	3,727	163	6,962	13	264	65	3,295
1977	4,038	2,640	1,544	724	2,210	109	342	1,386	3,864	148	7,065	28	346	201	3,568
1978	3,618	2,599	1,599	552	2,299	82	520	1,791	4,025	127	8,347	100	503	327	3,992
1979	4,499	2,935	2,233	590	2,491	80	606	1,528	4,318	123	8,372	49	470	321	4,759
1980[1]	4,478	3,806	2,664	887	3,671	78	678	1,724	4,051	121	8,008	66	358	227	5,190
1981[2]	4,000	3,750	2,200	950	3,200	120	650	1,600	4,025	118	7,700	80	370	185	5,400

[1] Preliminary. [2] Estimates. [3] Excludes rags for paperstock. [4] Paper base stocks, paper and manufactures.
Source: Dept. of Commerce

Paper and Board Production in the United States In Thousands of Short Tons

Year	Paper							Paperboard				Wet Machine Board	Construction[3]		Total All Types
	Newsprint	Coated Printing	Publicat. & Print.[5]	Writing & Relat.	Coarse[2]	Sanitary	All Paper Total	Other Bleached Paperboard	Corrugating Material	Unbleac. Kraft[6]	All Paperboard Total		Construction (Paper)	All Construction Total	
1970	3,345	3,279	2,646	2,937	5,439	3,548	23,625	1,856	4,332	11,436	25,477	139	1,594	4,276	53,516
1971	3,321	3,251	2,758	2,996	5,442	3,660	23,811	1,938	4,596	11,700	26,135	138	1,837	5,001	55,086
1972	3,451	3,546	3,010	3,329	5,713	3,796	25,435	1,964	4,992	13,030	28,522	148	1,915	5,352	59,457
1973	3,459	3,814	3,116	3,817	5,694	3,726	26,483	1,971	5,285	13,139	29,267	149	1,858	5,406	61,304
1974	3,395	3,974	2,832	4,102	5,731	3,800	26,674	1,957	5,093	12,755	28,017	144	1,845	5,118	59,930
1975	3,476	3,318	2,400	3,244	4,805	3,669	23,306	1,792	4,411	11,170	24,452	115	1,616	4,648	52,521
1976	3,400	3,967	2,984	3,910	5,661	3,936	26,612	1,894	5,045	12,501	27,840	130	1,771	5,316	59,898
1977	3,525	4,215	3,316	4,170	5,930	4,045	28,096	1,968	5,485	105,902	29,006	N.A.	1,852	5,492	62,722
1978	3,489	4,513	3,507	4,277	5,778	4,036	28,506	1,634	5,792	N.A.	30,033	N.A.	1,915	5,625	64,300
1979	3,778	4,580	2,048	4,596	5,708	4,403	29,580	1,841	5,918	13,857	31,168	144	1,868	5,436	66,329
1980[1]	4,660	4,751	2,127	4,793	5,327	4,298	30,164	1,794	5,864	14,249	31,143	138	1,369	4,390	65,834
1981[4]	5,000	4,900	2,000	4,900	5,700	4,600	31,500	1,900	6,000	14,800	32,000	150	1,200	4,600	68,000

[1] Preliminary. [2] Packaging & industrial converting paper. [3] Paper and board. [4] Estimate. [5] Prior to 1979 data are for Book Paper, Uncoated. [6] Prior to 1979 data are for Linerboard. *Source: Bureau of the Census*

PAPER

Average Price of Newsprint Rolls Index—1967 = 100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1975	181.8	181.8	181.8	184.7	184.7	184.7	184.7	184.7	184.7	184.7	184.7	184.7	184.0
1976	184.7	184.7	190.1	193.1	197.9	197.9	202.7	203.3	205.3	205.3	205.3	207.6	198.2
1977	209.4	209.4	216.7	216.7	216.7	216.7	216.7	216.7	216.7	216.7	216.7	216.7	215.4
1978	216.7	216.7	216.7	228.2	228.2	228.2	228.2	230.5	230.5	230.5	230.5	230.5	226.3
1979	230.5	238.9	241.7	244.7	247.7	247.7	247.7	247.7	247.7	262.1	265.1	268.2	249.4
1980	269.4	269.4	269.4	269.4	277.6	283.7	283.7	N.A.	283.8	283.8	283.8	298.3	279.3
1981	301.9	301.9	301.9	301.9	301.9	N.A.	301.9	309.3	320.0	316.8	314.4	316.8	308.4
1982	316.8	316.8											

[1] Standard rolls, contract, delivered to principal ports. *Source: Bureau of Labor Statistics* (0913–0291.99)

Average Price of Wood Pulp, Bleached Sulphate Softwood In Dollars Per Ton

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1975	364.13	364.13	364.13	364.13	364.13	358.11	364.13	364.13	364.13	364.13	364.13	366.50	363.83
1976	366.50	366.50	366.50	366.50	366.50	366.50	367.13	365.06	365.06	365.06	365.06	365.06	365.95
1977	360.93	364.64	364.64	364.64	368.54	368.54	368.54	368.54	357.57	354.75	N.A.	N.A.	364.13
1978	350.76	341.15	341.15	330.52	327.66	327.66	306.73	306.73	306.73	339.91	336.97	336.97	329.41
1979	345.85	346.91	358.68	363.48	363.48	373.36	377.45	383.87	383.87	413.59	413.59	413.59	377.89
1980	440.95	440.95	440.95	473.35	473.35	473.35	476.97	476.97	476.97	476.97	476.97	476.97	467.05
1981	476.97	476.97	476.97	487.64	487.54	487.54	487.54	487.54	487.54	488.07	506.75	506.75	488.15
1982	503.14	501.65											

Source: Bureau of Labor Statistics (0911–0211.06)

Index Price of Coated Printing Paper, No. 3 Index Dec. 1973 = 100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1977	134.7	135.8	136.3	137.9	137.7	137.5	139.3	138.9	139.4	143.7	143.8	144.0	139.1
1978	146.1	146.3	150.0	151.7	152.5	153.8	153.8	154.9	156.3	159.7	161.2	160.6	153.9
1979	161.7	163.2	163.7	165.4	166.5	167.1	167.1	167.7	168.1	171.8	171.8	171.7	167.2
1980	170.8	175.0	176.8	178.9	178.9	178.9	179.0	179.6	179.8	179.9	182.3	183.3	178.6
1981	183.5	185.7	186.8	189.3	191.4	191.4	191.4	189.6	198.1	202.0	202.0	204.2	193.0
1982	204.2	204.9											

Source: Bureau of Labor Statistics (0913–0113.99)

Index Price of Shipping Sack Paper[1] Index Dec. 1973 = 100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1977	147.5	147.5	147.5	157.0	158.7	158.1	158.1	158.1	158.1	158.1	158.1	158.1	155.4
1978	158.1	158.1	158.1	158.1	158.1	158.1	158.1	158.7	167.7	168.2	168.2	168.2	161.5
1979	168.2	168.2	171.0	178.6	178.6	178.6	178.6	178.6	178.6	185.7	187.3	187.3	178.3
1980	176.5	183.7	188.3	195.5	195.5	195.5	192.2	194.2	194.2	194.2	N.A.	194.2	191.3
1981	203.2	213.0	217.4	225.4	224.5	224.5	224.5	224.5	224.5	224.5	223.4	223.4	221.1
1982	223.4	223.4											

[1] Unbleached kraft. *Source: Bureau of Labor Statistics* (0913–0304.99)

Average Price of Boxboard[1] In Dollars Per Ton

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1973	155.31	157.16	157.16	162.11	163.35	164.59	164.59	164.59	164.59	170.16	173.87	173.87	187.28
1974	202.95	202.95	217.80	224.40	231.00	231.00	231.00	234.30	234.30	234.30	234.30	232.65	225.91
1975[2]	205.27	205.27	205.27	203.62	203.63	203.63	203.63	203.63	203.63	203.63	203.63	203.63	204.04
1976	203.63	203.63	203.63	203.63	203.63	210.27	211.92	211.92	211.92	211.92	211.92	211.92	208.34
1977	211.92	211.92	211.92	211.92	211.92	216.87	216.87	216.87	216.87	216.87	218.53	218.53	215.08
1978	218.53	220.18	221.83	221.83	221.83	221.83	221.83	221.83	221.83	223.48	223.48	225.13	221.97
1979	225.13	228.43	N.A.	N.A.	311.03	311.03	320.60	322.25	322.25	328.85	328.85	335.78	303.42
1960	335.78	335.78	348.98	360.53	360.53	363.83	377.02	377.02	N.A.	390.63	390.63	393.10	366.71
1981	395.58	399.29	399.29	405.48	411.67	411.67	411.67	411.67	411.67	411.67	411.67	411.67	407.75
1982	404.86	404.86											

[1] Manila lined chip boxboard, No. 90 or heavier, eastern territory. [2] Beginning 1975 prices are for BENDING CHIPBOARD (Folding Boxboard). *Source: Bureau of Labor Statistics* (0914–0225.03)

Peanuts and Peanut Oil

World production of peanuts (in shells) in 1981/82 was estimated by the USDA Foreign Agricultural Service (FAS) at 18.4 million tonnes, about 15 percent above the 16.0 million produced in 1980/81 and compared with the 1974/75–1978/79 average of 17.8 million. World peanut oil production in 1981/82 (calculated on the basis of the portion of the crop expected to be available for crushing or export—not on actual production) was estimated by the USDA at close to 3.2 million tonnes vs. about 2.8 million in 1980/81. India was expected to continue in 1981/82 as the world's major producer of peanuts, with in-shell production forecast at 6.0 million tonnes. China's production, second largest, was forecast at 3.6 million tonnes.

The 1981/82 U.S. peanut crop, the world's third largest, was forecast by the FAS at 1.8 million tonnes, almost 60 percent above the previous year's level. The 1980/81 crop was the smallest U.S. peanut crop since 1964.

U.S. peanut supplies for 1981/82 (August-July) were expected to total about one-third above the previous season, but 4 percent below 1979/80. Due to the increase in acreage and yield, the 1981 crop was up 71 percent from 1980 and slightly below the record set in 1979.

All major use categories were expected to be higher in 1981/82 than in the last season. With the larger, higher quality 1981/82 crop, domestic crushing was expected to be up one-third from the 1981/82 season. Exports could go up by one-half from the last season's 6-year low. However, due to the small domestic output in the last season, it was expected that some foreign buyers may have found other sources.

Domestic edible use of peanuts was expected to rise by one-fourth, to 2 billion pounds. Manufacturers of peanut butter and other products had ample supplies from the 1981 crop, and retail prices had declined.

Peanut stocks in commercial storage on February 28, 1982, totaled 2.38 billion pounds of equivalent farmers' stock, more than double the amount on hand a year earlier. This total included 1.51 billion pounds of actual farmers' stock compared with 693 million pounds on hand a year ago. Shelled peanuts on hand on February 28, 1982 totaled 816 million pounds of equivalent farmers' stock, almost double the 416 million pounds on hand a year ago. Roasting stock totaled 57.8 million pounds, up 73 percent from the 33.4 million pounds on hand a year ago. There were 429 million pounds of CCC uncommitted stock on hand as of February 28, 1982.

Government Programs

The Agriculture and Food Act of 1981, PL 97–98, provides a poundage quota of 1.2 million short tons in 1982, 17 percent below 1981. Growers approved the quotas in the January 1982 referendum. Loan rates for the 1982 crop were set by law at no less than $550 a ton. Rates for "additional" peanuts were set at $200 a ton (no deduction from the loan advance is provided for storage, handling, and inspection costs.)

Price support is carried out primarily through non-recourse warehouse-storage loans to approved grower associations acting for farmers. Also, the price may be supported through loans to producers on farm-stored peanuts and purchases from producers. The USDA proposed new regulations for reducing marketing quotas for 1982-crop peanuts. (Marketing quota penalties apply to peanuts grown in excess of the farm's poundage quota.)

Domestic Sales Prices

Farm prices for the 1981 crop averaged 26.7 cents a pound, up 1.6 cents from the previous season. However, prices declined as the season progressed because the crop was larger than originally anticipated. Even so, the value of the 1981 crop rose by 80 percent from 1980.

The sharp increase in yield per acre in 1981 reduced non-land production costs to 22 cents a pound, 9 cents below 1980. Costs per planted acre, however, rose to $546, 18 percent above 1980. Per acre costs were expected to increase about 10 percent in 1982, increasing per pound costs as well.

Crude Peanut Oil Produced[2] in the United States In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1975	17.7	12.8	12.1	13.3	17.2	22.8	29.2	29.1	33.6	34.6	27.6	25.3	275.3
1976	26.6	32.6	44.3	51.1	56.9	66.5	47.6	41.5	39.0	31.5	24.6	24.5	486.6
1977	20.7	24.7	35.5	33.0	32.8	30.1	24.7	22.4	6.9	6.1	10.5	4.4	252.0
1978	9.7	9.2	11.1	18.0	18.1	18.1	10.4	16.6	7.7	10.3	6.3	9.5	145.2
1979	11.7	14.2	22.5	18.6	23.0	15.5	8.2	10.8	4.5	4.5	6.1	7.7	183.0
1980	6.2	15.1	16.7	25.9	30.7	22.9	23.5	21.2	5.9	2.1	6.3	5.9	182.4
1981[1]	6.1	6.0	10.5	17.3	19.1	19.5	13.6	9.8	5.3	9.7	12.0	12.7	141.6
1982[1]	11.3												

[1] Preliminary [2] Not seasonally adjusted. *Source: Statistical Reporting Service, U.S.D.A.*

PEANUTS AND PEANUT OIL

World Production of Peanuts (in the Shell) In Thousands of Metric Tons

Crop Year	Argentina	Brazil	China[2]	Burma	India	Indonesia	Mali	Nigeria	South Africa	Senegal	Sudan	Taiwan	Thailand	United States	Zaire (Congo)	World Total
1969–0	217	754	444	2,350	5,130	382		1,360	343	800	—	101	180	1,150	200	16,513
1970–1	234	928	529	2,650	6,111	402		780	303	545	—	122	185	1,351	180	17,431
1971–2	388	849	486	2,580	6,181	400	150	845	385	920	—	98	200	1,363	180	18,121
1972–3	252	893	390	2,450	4,092	389	100	540	197	540	568	94	203	1,485	180	15.690
1973–4	440	590	513	2,350	5,932	483	120	342	537	700	544	97	210	1,576	200	16,216
1974–5	290	453	466	2,800	5,111	512	178	460	243	900	930	94	230	1,664	230	17,384
1975–6	400	442	404	2,700	6,755	633	119	302	132	1,424	796	91	142	1,750	268	18,912
1976–7	339	514	416	2,750	5,264	568	120	310	227	1,182	748	89	142	1,701	289	17,264
1977–8	600	324	457	2,065	6,087	682	126	302	298	671	1,027	77	119	1,690	295	16,443
1978–9	372	340	384	2,377	6,208	743	107	341	179	1,053	813	92	102	1,793	295	17,619
1979–0	672	465	337	2,822	5,772	708	57	377	344	600	852	86	122	1,800	295	17,013
1980–1[1]	295	310	484	3,600	5,020	795	60	400	307	489	799	85	136	1,047	295	15,966
1981–2[3]	240	340	500	3,600	6,000	857		400	200	900	800	85	150	1,791	295	18,287
1982–3[3]	265	450				885										

[1] Preliminary. [2] Includes Manchuria. [3] Estimated. *Source: Foreign Agricultural Service, U.S.D.A.*

Salient Statistics of Peanuts in the United States

Crop Year	Acreage Planted	Acreage Harvested For Nuts	Average Yield Per Acre In Lbs.	Production Picked and Threshed 1.000 Lbs.	Season Farm Price ¢ Lb.	Farm Value Million Dollars	Thousand Pounds (Yr. Beg. Aug.)			
	(1,000 Acres)						Exports		Imports	
							Unshelled	Shelled	Unshelled	Shelled
1969–0	1,512	1,456	1,742	2,535,394	12.3	312,358	1,530	100.051	20-	335
1970–1	1,518	1,469	2,030	2,983,121	12.8	382,967	6,436	213,027	1,269	204
1971–2	1,529	1,455	2,066	3,005,118	13.6	408,371	35,801	403,397	1,299	859
1972–3	1,533	1,486	2,203	3,274,761	14.5	475,367	4,369	385,588	1,039	443
1973–4	1,530	1,496	2,323	3,473,837	16.2	562,460	66,094	523,986	79	444
1974–5	1,520	1,472	2,491	3,667,604	17.9	657,987	17,703	548,083	127	466
1975–6	1,532	1,500	2,564	3,846,722	19.6	754,491	22,708	318,229	207	290
1976–7	1,549	1,518	2,464	3,739,190	20.0	746,675	24,765	580,496	432	66
1977–8	1,545	1,512	2,456	3,715,055	21.0	780,869	64,284	705,032	272	148
1978–9[1]	1,541	1,509	2,619	3,952,384	21.1	833,885	94,612	745,593	53	161
1979–0[1]	1,546	1,520	2,611	3,968,485	20.6	819,276	—Not Available—			
1980–1[2]	1,521	1,399	1,650	2,307,847	25.1	554,080				
1981–2[2]	1,514	1,488	2,654	3,948,985	26.7					
1982–3[2]	1,381									

[1] Preliminary. [2] Estimate. *Source: Economic Research Service, U.S.D.A.*

Supply & Disposition (Farmers' Stock Basis) & Support Program

Crop Year Begin Aug. 1	Supply				Disposition						Government Support Program				
	Million Pounds							Domestic Food Use					Amount Put under Support		
	Production[3]	Imports	Stocks Aug. 1	Total	Exports & Shipments	Crushed for Oil	Seed, Feed & Residual	Military	Civilian	Civilian per Capita (Lbs.)	Support Price ¢ Lb.	% of Parity	Quantity Mil. Lbs.	% of Prod.	Owned by CCC July 31 Mi. Lbs.
1969–0	2,535	1	357	2,893	140	581	237	3	1,574	7.8	12.375	76	622	24.5	—
1970–1	2,938	2	353	3,334	290	799	209	3	1,580	7.8	12.75	75	1,084	36.3	11
1971–2	3,005	2	453	3,460	552	814	79	—	1,623	7.9	13.42	75	1,238	41.2	4
1972–3	3,275	2	392	3,669	521	850	175	—	1,694	8.2	14.25	75	1,277	39.0	24
1973–4	3,474	1	429	3,904	709	683	119	—	1,840	8.8	16.42	75	1,029	29.6	0
1974–5	3,668	1	553	4,222	740	590	–54	—	1,800	8.5	18.30	75	1,072	29.2	552
1975–6	3,847	1	1,146	4,993	434	1,447	193	—	1,859	8.7	19.70	75	1,136	29.5	958
1976–7	3,739	1	1,060	4,800	783	1,108	513	—	1,789	8.4	20.70	75	854	22.8	0
1977–8	3,726	1	608	4,324	1,025	487	392	—	1,838	8.5	21.50	75	535	14.4	2
1978–9	3,952	1	581	4,534	1,141	527	284	—	1,959	9.2	21.00	67	515	12.9	—
1979–0	3,968	1	586	4,555	1,057	571	271	—	1,998	9.3	21.00	59	702	17.7	—
1980–1[1]	2,308	401	628	3,337	503	446	328	—	1,600	9.0	22.75	57	323	14.1	—
1981–2[2]	3,949	2	413	4,364	750	615					22.75				
1982–3[2]			700								29.50				

[1] Preliminary. [2] Estimate. [3] Production is on a net weight basis. *Source: Economic Research Service, U.S.D.A.*

U.S. Production of Peanuts—Harvested for Nuts, by States In Millions of Pounds

Crop Year	Alabama	Arkansas	Florida	Georgia	Louisiana	Mississippi	New Mexico	No. Car.	Oklahoma	So. Car.	Tennessee	Texas	Virginia	U.S. Total
1969	285.2	—	85.1	946.3	—	3.2	17.5	343.2	204.0	24.8	—	389.1	237.2	2,535
1970	315.4	—	110.0	1,125.5	—	4.4	18.3	445.9	192.0	29.6	—	429.9	312.1	2,983
1971	401.6	—	139.9	1,269.9	—	16.5	16.6	325.5	219.0	30.0	—	366.8	219.5	3,005
1972	368.4	—	137.7	1,341.4	—	16.0	20.5	370.2	242.7	31.8	—	480.5	265.7	3,275
1973	400.0	—	150.4	1,344.0	—	16.6	18.9	466.5	253.7	30.1	—	471.2	322.4	3,474
1974	474.4	—	170.5	1,661.5	—	6.0	13.0	384.3	217.7	31.0	—	413.3	295.9	3,668
1975	535.6	—	177.7	1,726.6	—	13.5	20.2	373.7	232.3	29.5	—	463.6	284.6	3,847
1976	513.6	—	165.0	1,554.3	—	12.3	21.7	440.7	246.0	24.6	—	463.6	309.0	3,739
1977	589.1	—	170.5	1,499.1	—	11.6	25.4	444.1	267.6	31.2	—	394.5	293.0	3,715
1978	551.8	—	182.1	1,725.3	—	13.1	24.1	465.4	207.0	35.7	—	436.5	311.6	3,952
1979	584.9	—	179.9	1,704.8	—	12.4	25.3	378.5	264.0	32.3	—	533.0	253.5	3,968
1980	265.0	—	143.0	994.6	—	7.5	22.4	291.3	140.2	14.3	—	293.3	136.4	2,308
1981[1]	602.0	—	177.0	1,637.3	—	12.7	23.3	548.7	189.3	36.0	—	400.4	322.4	3,949
1982														

[1] Preliminary, December estimate. *Source: Crop Reporting Board, U.S.D.A.*

Visible Supply (Stocks) of Peanuts and Products on Hand in the U.S. In Millions of Pounds

Year Begin. Aug. 1	Farmers' Stock Peanuts[2]				Shelled Edibles				Shelled Oil Stock[3]	Total Shelled	Roasting Stock[5]	Crude Peanut Oil[4]	Peanut Cake & Meal[4]
	Virginias	Runners	Spanish	Total	Virginias	Runners	Spanish	Total					
1969–0	.7	.6	3.6	9.1	103.4	67.0	56.4	226.8	23.4	250.2	14.9	9.5	8.9
1970–1	2.4	0	.5	2.8	105.8	65.4	67.1	238.3	12.7	251.0	16.1	8.8	7.7
1971–2	3.2	4.0	7.0	14.2	126.9	81.1	83.0	291.0	27.1	318.0	16.0	11.8	21.6
1972–3	3.4	8.2	15.7	27.4	66.9	90.7	67.0	224.5	33.8	258.3	20.9	8.5	3.0
1973–4	2.9	48.7	5.2	56.9	45.2	122.0	73.5	240.6	25.6	266.3	17.7	11.7	7.0
1974–5	3.8	30.4	4.2	38.4	87.3	209.5	62.9	359.8	16.2	375.9	15.1	10.9	6.8
1975–6	16.4	193.8	16.8	227.0	89.3	129.9	60.2	279.4	20.7	300.1	17.8	18.3	10.4
1976–7	4.0	244.0	1.9	250.0	68.5	159.9	87.2	315.7	83.2	398.8	30.6	22.9	5.9
1977–8	2.0	49.4	3.0	54.4	62.1	255.0	55.4	372.5	29.8	402.3	18.2	42.6	11.7
1978–9	8.0	20.0	.6	28.7	62.5	251.6	44.8	359.0	37.4	396.4	25.6	14.5	10.9
1979–0	7.2	5.9	.3	13.5	87.7	214.2	46.1	348.0	46.4	394.4	48.2	17.2	1.0
1980–1	8.4	44.0	11.0	63.4	67.9	265.4	38.4	401.1	29.5	401.1	30.6	21.6	8.8
1981–2[1]	14.1	14.1	.2	28.3	56.6	181.0	30.7	268.3	10.4	278.6	14.4	15.9	7.3
1982–3													

[1] Preliminary. [2] Excludes stocks on farms, but includes stocks owned or held for account of C. C. C. [3] Includes ungraded or straight run peanuts. [4] Relates to peanut oil mills only. [5] Cleaned & unshelled. *Source: Agricultural Marketing Service, U.S.D.A.*

Average Price Received by Producers in U.S. for Peanuts in the Shell In Cents Per Pound

Year	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Average[1]
1969–0	12.1	12.4	12.3	12.5	12.1	12.1	12.1	—	—	—	—	12.2	12.2
1970–1	12.9	13.2	12.3	11.9	13.0	12.0	—	—	—	—	—	12.9	12.6
1971–2	13.5	13.8	13.6	13.9	—	—	—	—	—	—	—	13.0	13.6
1972–3	14.8	14.3	14.3	14.3	14.2	—	—	—	—	—	—	15.0	14.5
1973–4	16.1	16.4	16.1	16.5	16.6	—	—	—	—	—	—	17.7	16.2
1974–5	17.9	18.1	17.6	17.8	17.6	—	—	—	—	—	—	18.4	17.9
1975–6	19.7	19.8	19.6	18.7	—	—	—	—	—	—	—	19.1	[illegible]
1976–7	19.8	19.9	20.0	20.0	20.2	—	—	—	—	—	—	21.3	20.0
1977–8	20.9	20.9	20.4	20.4	21.5	—	—	—	—	—	—	21.2	21.0
1978–9	20.8	21.4	21.0	20.8	21.2	—	—	—	—	—	—	21.1	21.1
1979–0	21.4	20.3	20.3	20.6	20.4	—	—	—	—	—	—	21.0	20.6
1980–1[2]	20.7	22.0	27.1	37.1	49.2	—	—	—	—	—	—	32.6	25.1
1981–2[2]	28.6	26.5	25.7	24.8	24.7	—	—	—					
1982–3													

[1] Weighted average by sales. [2] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

PEANUTS AND PEANUT OIL

Millings and Production of Peanuts and Products in the U.S. In Millions of Pounds

Year Begin. Aug. 1	Millings				Production									
	Farmers' Stock Peanuts[2]				Shelled Edibles									
	Vir-ginias	Run-ners	Span-ish	Total	Vir-ginias	Run-ners	Span-ish	Total	Shelled Oil Stock	Total All Grades	Cleaned (In Shell)	Shelled Peanuts Crushed	Crude Peanut Oil	Peanut Cake & Meal
1969–0	768.0	496.6	1,003	2,268	393.8	307.2	583.9	1,285	315.7	1,601	107.0	437.1	182.0	243.8
1970–1	880.4	692.9	1,043	2,616	442.0	371.1	560.0	1,373	482.3	1,855	119.1	600.9	253.5	340.4
1971–2	675.1	1,066	909.5	2,650	303.0	565.3	517.3	1,386	518.7	1,904	121.0	612.3	260.0	334.4
1972–3	689.1	1,288	911.4	2,888	284.9	666.7	551.6	1,503	567.1	2,070	113.3	638.8	269.0	359.8
1973–4	784.2	1,398	869.1	3,051	378.2	778.4	522.0	1,679	509.3	2,188	149.5	513.6	213.9	285.0
1974–5	636.1	1,646	641.3	2,923	283.3	892.2	381.6	1,557	558.4	2,116	132.2	443.7	188.4	245.6
1975–6	663.6	2,213	584.6	3,462	283.5	966.5	340.9	1,591	914.7	2,506	154.8	1,088	476.0	601.2
1976–7	669.7	2,356	429.9	3,455	271.6	1,212	273.8	1,757	729.8	2,487	150.8	833.2	362.6	466.5
1977–8	734.0	2,246	368.7	3,349	284.2	1,383	214.8	1,882	468.8	2,350	198.1	366.2	151.0	208.1
1978–9	805.5	2,272	346.4	3,424	320.4	1,413	210.5	1,944	436.0	2,380	233.5	396.0	164.3	218.0
1979–0	682.9	2,496	323.7	3,502	254.2	1,573	176.1	2,003	487.0	2,490	183.8	429.1	179.7	236.2
1980–1[1]	387.4	1,395	105.6	1,888	134.8	797.5	61.0	993.3	286.9	1,280	104.1	335.5	137.8	187.2
1981–2														

[1] Preliminary. [2] For prod. of shelled edible grades, oil stock (including ungraded or straight run peanuts) and roasting stock. *Source: Agricultural Marketing Service, U.S.D.A.*

Disappearance and Reported Uses of Peanuts and Products in the U.S. In Millions of Pounds

Year Begin. Aug. 1	Apparent Disappear.[2] (Milled Peanut Prod.)						Reported Used (Shelled Peanuts—Raw Basis)							
	Shelled Peanuts						Edible Grades Used in							
							Peanut							
	Edible Grades	Oil Stock[3]	Total All Grades	Cleaned (In Shell)	Crude Peanut Oil[4]	Cake & Meal[4]	Candy	Salted	Butter Sand-wiches	Butter[5]	Other Products	Total	Oil Stock Crushed For Oil, Cake & Meal	Total All Grades
1969–0	1,273	326.4	1,600	105.8	182.7	245.0	236.4	240.9	21.7	540.5	21.1	1,061	437.1	1,498
1970–1	1,320	467.9	1,788	119.2	250.5	326.5	243.2	238.8	25.3	540.4	17.6	1,065	600.9	1,666
1971–2	1,452	512.0	1,964	116.1	263.3	353.0	246.0	241.7	25.6	556.8	17.0	1,087	612.3	1,699
1972–3	1,487	575.3	2,062	116.6	265.7	355.8	259.8	254.4	25.6	578.1	17.6	1,136	638.8	1,774
1973–4	1,559	518.8	2,078	152.1	214.7	285.1	251.5	284.3	23.9	660.0	19.3	1,239	513.6	1,753
1974–5	1,637	551.0	2,188	129.4	181.0	242.0	217.0	278.3	20.4	651.0	14.4	1,181	443.7	1,625
1975–6	1,555	852.2	2,407	142.0	471.3	605.8	239.7	301.6	21.0	648.1	16.0	1,226	1,088	2,314
1976–7	1,700	783.2	2,483	163.2	342.9	460.7	235.0	253.8	24.2	617.9	17.8	1,149	833.2	1,982
1977–8	1,895	461.2	2,356	190.6	179.1	208.9	235.2	274.2	28.2	623.8	18.7	1,180	366.2	1,546
1978–9	19.55	426.9	2,382	210.9	161.6	227.9	268.4	291.6	28.1	664.9	19.1	1,272	396.0	1,668
1979–0	1,979	503.9	2,483	201.4	175.3	228.4	258.4	284.9	30.3	700.9	19.3	1,293	429.1	1,722
1980–1[1]	1,097	306.0	1,403	120.3	143.5	188.7	237.9	205.5	24.1	588.6	19.7	1,076	335.5	1,411
1981–2														

[1] Preliminary. [2] Includes in transit, exports and domestic use, except for oil stock for which disappearance is assumed to equal crushings. [3] Graded & ungraded oil stock only. [4] Relates to peanut oil mills only. [5] Peanuts used in peanut butter by mfrs. for own use in candy is included under peanut candy. *Source: Statistical Reporting Service, U.S.D.A.*

World Imports of Peanut Oil (Crude & Refined) into Specified Countries In Thousands of Metric Tons

Year	Al-geria	Aus-tralia	Austria	Bel-gium-Lux.	Vene-zuela	Canada	Domin-ican Rep.	France	West Ger-many	Hong Kong	Italy	Singa-pore	Nether-lands	Swit-zerland	Port-ugal	United King-dom
1969	.5	4.6	6.3	17.1	—	8.4	.5	134.9	57.0	14.0		5.0	8.6	—	5.1	85.2
1970	.9	6.9	4.0	21.4	—	8.8	5.5	142.6	52.3	12.3		6.1	9.4	—	6.7	95.8
1971	0	4.7	4.4	28.5	4	5.3	17	124.0	54.7	15.0		4.8	11.1	—	3.6	67.8
1972	13	4.3	4.3	32.9	2	7.4	17	205.9	71.5	15.5		3.6	9.2	—	8.3	60.8
1973	30	2.4	4.7	32.0	15	7.4	14.1	167.3	66.3	16.2		4.0	20.0	—	5.5	74.8
1974	1	4	3	23	5	6	4	142	51	12		6	15	—	2	37
1975	0	3	3	21	32	7	4	179	38	16		1	9	—	6	29
1976	6	2	2	31	38	7	16	218	37	20	22	3	8	—	—	20
1977	5	4	2	29	64	7	15	217	37	23	31	2	8	—	—	16
1978	—	1	2	25	66	6	2	186	38	22	30	2	11	14	—	15
1979	—	2	2	35	1	5	—	221	40	25	46	2	21	20	—	15
1980[1]	—	—	3	4.2	—	5	—	247	39	29	42	3	33	20	—	17
1981																

[1] **Preliminary.** *Source: Foreign Agricultural Service, U.S.D.A.*

Production, Consumption, Stocks and Foreign Trade of Peanut Oil in the U.S. In Millions of Pounds

Year	Production		Consumption		Stocks—Dec. 31		Imports for Consumption	Exports	
	Crude	Refined	In Refining	In End pdt's.	Crude	Refined		Crude	Refined
1969	188.2	148.6	153.7	157.4	8.0	6.3	—	31.6	1.9
1970	196.5	157.6	163.3	168.0	8.7	6.6	—	24.7	7.3
1971	280.6	183.3	189.8	189.2	7.8	8.4	—	84.2	.8
1972	257.8	170.9	177.4	178.1	15.9	5.2	—	60.0	.7
1973	265.9	156.0	162.3	160.5	18.9	6.2	—	100.1	3.3
1974	185.0	128.9	134.9	130.4	16.5	7.2	1.1	45.1	.7
1975	275.3	144.9	150.8	122.7	42.6	23.1	.7	17.6	9.2
1976	486.6	259.9	267.8	249.7	192.3	17.4	1.2	9.7	95.7
1977	252.0	249.7	257.2	243.9	91.5	7.6	—	71.8	9.7
1978	145.2	171.9	178.0	169.0	7.3	4.7	—	71.7	17.2
1979[1]	183.0	130.1	134.3	120.4	22.6	7.3			
1980[1]	182.4	170.6	166.7	165.3	7.5	4.3			
1981	141.6	122.8	133.5	115.3	12.9	5.2			

[1] Preliminary. *Source: Bureau of Census*

Utilization of Peanut Oil in the United States In Thousands of Pounds

Year Begin. Aug.	Shortening	Margarine	Cooking and Salad Oils	Other Edible	Total Food Uses	Non-Food Uses	Factory Consumption	Foots & Loss	Domestic Disappearance
1969–0	16,000	1,000	129,000	—	145,000	9,000	164,000	5,000	154,000
1970–1	16,000	—	152,000	13,000	181,000	12,000	188,000	7,000	193,000
1971–2	15,000	—	160,000	8,000	183,000	12,000	196,000	7,000	195,000
1972–3	14,000	—	122,000	11,000	147,000	11,000	156,000	6,000	159,000
1973–4	23,000	—	124,000	1,000	147,000	11,000	167,000	6,000	158,000
1974–5	13,000	—	87,000	44,000	145,000	8,000	116,000	5,000	153,000
1975–6	27,000	28,000	150,000	59,000	264,000	12,000	232,000	9,000	276,000
1976–7	29,000	27,000	143,000	26,000	225,000	8,000	218,000	6,000	232,000
1977–8[1]	20,000	—	211,000	–47,000	183,000	11,000		8,000	194,000
1978–9[2]	16,000		146,000						120,000
1979–0[2]			98,000						193,000
1980–1[2]			153,000						150,000
1981–2									

[1] Preliminary. [2] Estimate. *Source: Bureau of the Census*

Average Price of Domestic Crude Peanut Oil (in Tanks) F.O.B., Southeast Mills In Cents Per Pound

Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Average
1969–0	17.2	17.8	17.2	17.8	18.5	18.0	18.5	18.9	18.5	18.5	18.9	19.2	18.3
1970–1	19.8	19.8	20.2	21.1	21.1	20.4	19.8	20.6	20.4	21.4	21.8	20.6	20.6
1971–2	19.8	19.9	20.4	19.3	19.0	20.1	21.6	21.3	20.6	20.9	19.9	19.3	20.2
1972–3	19.4	20.8	22.3	22.1	21.7	20.9	21.7	23.0	23.7	23.6	34.1	26.4	23.3
1973–4	28.0	28.6	37.1	42.4	48.0	49.8	48.5	49.8	50.9	49.9	50.9	49.8	44.5
1974–5	52.6	50.9	49.8	46.6	45.9	40.5	39.3	36.6	40.9	47.3	52.7	49.3	46.6
1975–6	42.2	39.3	35.3	35.4	37.8	38.9	35.4	31.0	33.5	38.3	36.4	38.0	37.1
1976–7	38.0	37.3	38.9	40.3	41.0	40.8	43.6	35.5	34.7	29.8	29.2	30.7	36.6
1977–8	34.1	33.4	42.8	47.3	44.9	41.2	46.6	48.1	47.1	44.5	44.9	48.6	43.6
1978–9[1]	45.1	49.7	46.0	51.4	47.4	37.9	40.9	41.2	36.5	39.0	37.0	35.5	42.3
1979–0	34.4	31.1	29.5	25.9	25.8	22.9	20.5	22.4	23.1	26.9	33.2	36.0	27.6
1980–1	35.8	48.7	49.1	47.7	39.3	34.1	34.0	37.1	38.0	38.1	43.2	40.3	40.5
1981–2	34.5	34.5	30.9										
1982–3													

[1] Prices prior to 1978–9 are for REFINED in New York. *Source: Agricultural Marketing Service, U.S.D.A.*

Pepper

Black and white pepper production by the world's principal producing countries (Brazil, India, Indonesia, and Malaysia) during 1982 was forecast by the USDA at 138,000 tonnes, slightly above the revised estimate of production in 1981 of 136,600 tonnes. This compares with 1980's output of 144,000 tonnes. Planted area to pepper in these four countries increased from 186,100 hectares in 1980 to 191,800 in 1981 and was forecast at 194,500 hectares in 1982. However, depressed pepper prices caused by oversupply, coupled with increased production costs, dampened the production outlook. U.S. black and white pepper imports in 1981 declined 5 percent in volume, to an estimated 31,117 tonnes from 1980. However, because of lower prices the import value fell by 30 percent to $40.8 million.

World exports of black and white pepper from the major producing countries in 1980 totaled 122,000 tonnes, 11 percent greater than 1979 exports of 110,281 tonnes. Larger shipments by Brazil, Indonesia, and India more than offset reduced exports by Malaysia. Despite lower shipments by India and Malaysia, provisional data indicated that world exports in 1981 rose slightly to 125,000 tonnes because of record Brazilian shipments and a continued recovery in Indonesian exports.

Brazilian pepper exports were at a record level in 1981, as shipments during January–November reached 42,896 tonnes, well above the previous record level of 31,964 tonnes in 1980. But with declining production and low prices, exports are forecast to fall sharply in 1982. Brazilian pepper production in 1981 was estimated at about 28,000 tonnes, down from the 1980 outturn of 35,000 tonnes. The smaller harvest was attributed to low market prices, increased production costs, and high interest rates which discouraged growers from making new plantings, and resulted in reduced fertilizer use and curtailment of other cultural practices.

Malaysia's pepper exports in 1980 fell by 15 percent from the 1979 level to 30,709 tonnes. Exports in 1981 continued to decline to an estimated 28,000 tonnes. Exports during January–September 1981 totaled 22,910 tonnes, compared with 24,948 tonnes during the corresponding 1980 period. Malaysia's pepper production in 1981 was estimated at 31,500 tonnes, down from the 1980 crop of 33,750 tonnes. The 1982 crop was forecast to decline slightly to around 30,000 tonnes.

Indonesia's pepper exports in 1980 increased by 17 percent from 1979 to 29,345 tonnes. Exports during January–October 1981 totaled 28,045 tonnes, indicating annual shipments approximating 32,000 tonnes. The 1981 pepper crop was estimated at about 39,000 tonnes, slightly above the 1980 harvest of 37,000 tonnes. A modest increase was forecast for

World Exports of Pepper (Black & White) by Major Producing Countries In Metric Tons

Year	Brazil	India	Indonesia	Singapore[2]	Malagasy Rep.	Sarawak	Sri Lanka
1970	9,018	19,657	2,457		2,161	24,405	858
1971	17,235	16,901	23,566		1,284	26,914	46
1972	15,297	20,627	22,756		3,826	26,177	107
1973	13,761	27,942	25,452		3,193	22,830	518
1974	15,491	28,569	15,188		2,241	28,933	337
1975	17,944	24,399	14,525		3,461	29,815	96
1976	19,986	17,813	29,481		2,958	34,850	10
1977	17,099	25,892	30,856		3,748	26,795	635
1978	29,505	19,370	37,090	40,904	1,137	30,780	1,205
1979	25,186	20,545	24,986	38,395	N.A.	36,118	876
1980[1]	31,964	26,795	29,345	33,233	N.A.	30,709	N.A.

[1] Preliminary. [2] Reexports. *Source: Foreign Agricultural Service, U.S.D.A.*

United States Imports of Pepper from Specified Countries In Metric Tons[2]

	Black Pepper									White Pepper					
Year	Brazil	Spain	Sri Lanka (Ceylon)	India	Indonesia	Malaysia	Singapore	China	Total	Brazil	China	Indonesia	Malaysia	Singapore	Total
1969	11,367	—	999.2	2,749	29,182	1,698	2,351		48,390	864.0	—	4,019	67.2	413.3	5,610
1970	9,018	—	970.6	8,452	13,315	8,307	2,376		42,675	137.4	—	4,562	207.2	548.8	5,639
1971	13,433	—	28.5	6,993	25,767	6,543	1,895		54,941	88.2	—	4,069	329.4	336.2	4,915
1972	8,869	—	—	2,753	28,911	5,088	1,778		47,440	148.8	—	4,875	158.2	210.1	5,449
1973	8,630	—	302	9,690	29,627	544	849		49,827	730.9	—	4,446	58.3	330.1	5,588
1974	6,914	—	90	16,277	19,627	5,415	1,283	—	49,781	121.4	—	5,627	189.8	155.7	6,327
1975[2]	6,436	—	41	6,708	4,613	4,487	773	10	23,156	170	—	1,514	63	59	1,813
1976	6,609	—	—	359	11,774	4,037	1,321	3	24,128	53	—	2,118	56	128	2,362
1977	5,282	—	157	4,890	9,466	3,140	478	—	23,540	40	—	2,765	42	63	2,920
1978	10,472	—	186	1,880	10,595	2,293	604	6	26,142	285	—	1,994	64	28	2,382
1979	9,704	—	281	627	10,898	2,644	156	61	24,482	414	10	2,159	51	94	2,756
1980	10,075	17	153	3,993	11,408	3,640	296	1	29,644	509	35	2,419	100	131	3,194
1981[1]	14,686	—	295	559	12,615	273	37	21	28,563	763	1	1,561	43	75	2,503

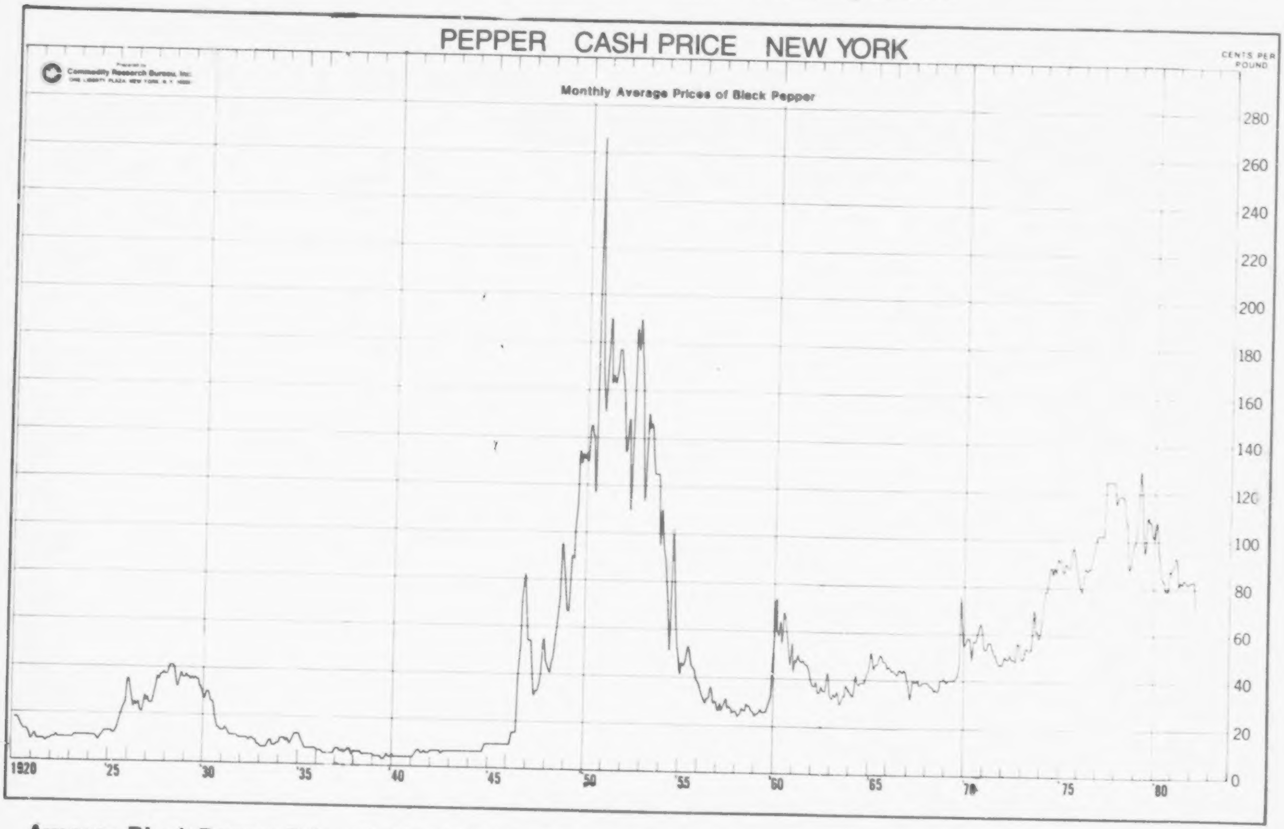
[1] Preliminary. [2] Data prior to 1975 are in THOUSANDS OF POUNDS. *Source: Foreign Agricultural Service, U.S.D.A.*

1982, reflecting favorable growing conditions and increased area in production.

India's pepper exports in 1980 totaled 26,795 tonnes, 30 percent above the 1979 level. However, shipments in 1981 were down sharply to an estimated 17,000–18,000 tonnes, as exports in January–October totaled only 14,877 tonnes, of which 10,047 were to the USSR. India's 1981/82 (November–October) pepper crop was forecast at 40,000 tonnes, slightly above the 1980/81 outturn of 38,000 tonnes.

World pepper prices continued to trend lower during 1981, reflecting ample supplies and aggressive selling by Brazil. New York spot prices for Brazilian black pepper averaged 62.3 cents per pound in 1981, compared with 83.3 in 1980 and 91.9 cents in 1979. Record Brazilian shipments and lower prices contributed to make Brazil the largest source of U.S. black pepper imports in 1981. New York spot prices for Indonesian Lampong black pepper averaged 68.8 cents per pound during 1981, well below the 1980 average of 87.6 cents. However, world pepper prices firmed during the first quarter of 1982.

The International Pepper Community (IPC), comprised of the five major producers (including Madagascar) decided in 1981 that the minimum f.o.b. export price for Brazil and Malaysia would be set at 70 cents per pound for ASTA black grade, and 72 and 73 cents, respectively, for ASTA black grade from Indonesia and India. These prices were to be put into effect on January 1, 1982.



Average Black Pepper Prices in New York (Lampong, Whole Pepper) In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1971	52.5	52.5	56.0	56.0	55.0	52.5	51.0	51.0	48.0	47.0	46.5	47.0	51.3
1972	49.0	49.5	49.0	49.0	51.0	48.5	48.5	48.0	56.0	56.0	52.0	49.3	50.5
1973	49.3	52.0	54.0	53.0	52.5	53.0	65.0	70.0	61.0	61.0	57.5	61.0	57.4
1974	64.0	70.0	78.0	78.0	85.0	88.0	88.0	85.0	87.5	85.5	92.0	91.0	82.7
1975	91.5	87.0	86.0	90.0	89.0	87.5	88.5	95.0	97.0	94.0	87.5	85.0	89.8
1976	81.0	79.0	77.5	88.0	88.0	87.0	87.5	87.5	N.A.	N.A.	N.A.	102.0	86.4
1977	102.0	102.0	102.0	102.0	125.0	125.0	125.0	125.0	125.0	125.0	114.5	N.A.	115.7
1978	118.5	118.5	118.5	118.5	117.5	109.0	107.5	88.0	88.5	95.5	98.5	98.5	106.4
1979	105.0	N.A.	130.0	N.A.	N.A.	95.0	97.0	110.0	108.0	108.0	102.0	101.3	106.3
1980	108.0	101.0	96.3	93.0	87.0	84.3	82.8	79.0	79.0	88.0	86.5	89.3	89.5
1981	88.5	93.3	92.0	81.0	83.0	82.3	84.0	82.5	82.3	82.3	82.5	82.5	84.7
1982	82.5	82.5	75.0										

Source: Bureau of Labor Statistics (0289–0131)

Petroleum

Total domestic crude oil production averaged 8.56 million barrels per day in 1981, slightly down from the 1980 average of 8.60 million barrels. The total number of oil and gas (including dry) wells completed in 1981 was 78,454, up over 29 percent from the 60,845 completed in 1980. The 1981 breakdown included 37,639 oil wells, 17,870 gas wells and 22,945 dry holes, according to U.S. Department of Energy (DOE) data. The number of (rotary) drilling rigs in operation averaged 3,970 per month in 1981, compared with 2,909 in 1980. Total footage of wells completed increased by 27 percent to 361.0 million feet.

U.S. crude oil imports, excluding those for the Strategic Petroleum Reserve (SPR), decreased by 20 percent in 1981 to a daily average of 4.150 million barrels from 5.219 million in 1980. Total 1981 crude oil input into domestic refineries fell to a daily average of 12.48 million barrels from 13.48 million a year earlier. Stocks of primary crude oil held at refineries, pipeline terminals and on leases totaled 368.5 million barrels on December 31, 1981, up from 358.2 million held a year earlier. Stocks in the SPR, as of December 31, 1981 increased to 235.0 million barrels from 107.8 million a year earlier.

Total petroleum imports (crude and products, including those for the SPR) averaged 5.726 million barrels per day in 1981, compared with the 1980 rate of 6.865 million.

Total domestic refined petroleum products supplied (domestic usage) averaged 16.001 million barrels per day in 1981, down 6 percent from 17.056 million in 1980. Daily demand (product supplied) for motor gasoline accounted for 41 percent of the 1981 average daily total, increasing to an average of 6.586 million barrels a day from 6.579 million in 1980. End of December 1981 stocks of motor gasoline were estimated at 251.4 million barrels, down from 261.3 million a year earlier. Domestic usage (product supplied) of residual fuel oil fell to an average 2.06 million barrels per day in 1981 from 2.51 million in 1980. Ending stocks were put at 78.3 million barrels, down from 91.8 million on December 31, 1980. Distillate fuel oil domestic usage (product supplied) slipped to 2.83 million barrels average per day from 2.87 million in 1980, while stocks decreased to an estimated 190.2 million barrels on December 31, 1981 from 205.1 million on December 31, 1980. These fuel oil figures reflected the lower consumption despite the extremely harsh winter.

Prices

The actual domestic wellhead price for crude oil averaged $31.77 a barrel in 1981, up 50 percent from the 1980 average of $21.19. On a same-month basis, the price rose 19 percent from $25.80 in December 1980 to $30.72 in December 1981. The refiner acquisition cost for domestic crude rose over 17 percent to $33.47 per barrel in December 1981 from $28.55 a year earlier. The refiner cost for imported oil increased to $35.80 from $35.63 per barrel. DOE estimates put the composite acquisition cost at $34.26 a barrel in December 1981, up from $31.39 a year earlier. The composite represents the average costs of domestic and imported crude oil, including transportation and fees.

Gasoline prices (annual average, all types, retail) in 1981 averaged $1.35 a gallon, versus $1.22 a gallon in 1980. Retail prices for heating oil rose from 97.8 cents a gallon in 1980 to 120.5 cents (estimated 1981 national average). No. 2 Diesel prices (retail) increased from an average of $0.87 in November 1980 to an estimated $1.05 in November 1981. However, some petroleum product prices weakened considerably in early 1982.

In early 1982, there was excess world oil production and high petroleum inventory levels due to the slowdown in worldwide economic activity and the continued improvement in energy conservation. Prices paid for gasoline, diesel fuel, and LP gas were expected to remain stable or register only moderate increases in 1982, due to the downward pressure on world oil prices. However, natural gas and electricity prices paid were expected to increase as much as 20 and 9 percent, respectively.

In the United States, petroleum supplies were expected to continue abundant relative to anticipated use. In 1981, domestic production of crude oil declined by less than 1 percent from 1980's 8.6 million barrels a day, and was projected to be around 8.4 million in 1982. However, it appeared possible that consumption from petroleum inventories could offset production declines.

Responding to soft demand worldwide, domestic and global refineries continued in 1981 to operate well below capacity. U.S. refiners ran at 78 percent of capacity in 1980 and 75 percent in 1981.

U.S. petroleum consumption in 1982 was expected

World Production of Crude Petroleum, by Specified Countries In Millions of Barrels[3] (42 Gallons Each)

Year	Argentina	Canada	China	Libya	Iran	Iraq	Kuwait	Nigeria	Mexico	Indonesia	Un. King.	U.S.S.R.	Saudi Arabia	United States	Venezuela	World Total
1971	155	492	N.A.	1,008	1,662	624	1,068	558	177	326		2,778	1,642	3,454	1,295	17,663
1972	158	561	N.A.	820	1,839	529	1,201	665	185	396		2,896	2,202	3,455	1,178	18,601
1973	154	648	N.A.	794	2,139	737	1,102	750	191	489		3,094	2,773	3,361	1,229	20,368
1974	151	617	475	555	2,198	721	930	823	238	502		3,374	3,096	3,203	1,086	20,538
1975	144	521	572	551	1,953	826	762	652	294	477		3,609	2,583	3,052	856	19,498
1976	146	489	646	704	2,168	884	700	756	327	550		3,822	3,054	2,976	840	21,192
1977[2]	157	482	654	759	2,080	827	651	765	358	615		3,991	3,290	2,985	817	21,826
1978[2]	168	480	732	732	1,980	898	920	765	440	597		4,100	3,030	3,000	790	21,900
1979[3]		1,496	2,122	2,092	3,168	3,477	2,500	2,302	1,461	1,591	1,568	11,460	9,532	8,552	2,356	62,698
1980		1,424	2,114	1,787	1,662	2,514	1,656	2,055	1,937	1,577	1,622	11,770	9,900	8,597	2,167	59,452
1981		1,285	2,020	1,145	1,330	990	1,140	1,425	2,310	1,605	1,805	11,800	9,815	8,562	2,110	55,600

[1] Estimate. [2] Preliminary. [3] Starting 1979, data is for thousand barrels per day. *Source: Bureau of Mines*

to decline by less than 1 percent to about 16.2 million barrels a day. If the forecast holds, 1982 would be the fourth consecutive year of declining U.S. oil consumption, which peaked in 1978. In 1981, total consumption dropped about 4 percent from 1980's 17 million barrels a day.

The 1982 outlook for petroleum and petroleum product prices remained somewhat uncertain, but appeared likely to depend partly on how close OPEC came to lowering oil production to its target of 18.5 million barrels a day, versus the early 1982 average of around 20 million barrels a day.

Other factors likely to continue to affect world production, world trade, and prices were: (1) the high interest rates in many industrial nations, and the related recessions; (2) the world political situation, especially developments in the Middle East; (3) U.S. energy policies, including possible deregulation of natural gas prices.

Futures Markets

Heating oil and Leaded gasoline futures (N.Y. harbor delivery) are traded on the New York Mercantile Exchange (NYMEX). Gasoil futures are traded on the International Petroleum Exchange (IPE) in London.

Production of Major Refined Petroleum Products in Continental U.S. In Millions of Barrels

Year	As-phalt[2]	Coke[3]	Fuel Oil Dis-tillate	Fuel Oil Resid-ual	Gaso-line[4]	Petro-Chemical Feedstocks	Special Naph-thas	Miscel pdt's.	Total Jet Fuel	Kero-sene	Liquified Gases[7] (For Fuel)	Lubri-cants	Road Oil	Still Gas[5]	Wax[6]
1971	157.0	109.1	912.1	274.7	2,203	110.9	28.6	15.4	304.7	87.5	88.6	65.5	8.8	157.0	6.9
1972	155.3	119.8	963.6	292.5	2,320	124.0	32.4	16.4	310.0	80.1	84.5	65.3	7.9	171.0	6.1
1973	167.9	132.3	1,030.2	354.6	2,402	132.6	33.1	19.9	313.7	80.1	89.6	68.7	7.3	176.8	6.8
1974	164.2	123.7	974.0	390.5	2,337	134.8	33.5	25.2	305.1	56.9	81.6	70.7	7.2	175.7	6.9
1975	144.0	129.2	968.4	451.0	2,394	122.2	27.3	32.2	318.0	55.7	80.5	56.2	4.9	175.4	5.7
1976	139.7	130.1	1,070	504.0	2,517	164.4	32.6	47.2	335.8	55.7	84.2	61.8	3.2	180.7	7.0
1977	154.1	133.8	1,197	639.0	2,582	191.4	31.4	53.0	355.7	62.0	85.3	64.5	3.3	192.5	7.2
1978	172.9	134.6	1,156	608.6	2,631	223.1	36.7	47.0	353.9	56.3	87.5	69.5	3.2	200.0	6.9
1979[1]	168.8	137.3	1,151	615.6	2,515	252.1	36.6	42.7	369.2	66.8	84.7	71.0	1.6	205.1	6.9
1980[1]	141.2	135.5	974.1	578.4	2,394	254.6	36.5	38.5	365.6	50.1	87.0	65.1	2.5	190.3	6.4
1981[1]	124.2		954.9	480.3	2,351				353.5	43.6		60.6			

[1] Estimated. [2] 5.5 barrels = 1 short ton. [3] 5 barrels = 1 short ton. [4] Finished. [5] 1 barrel = 3.600 cubic feet. [6] 1 barrel = 280 pounds. [7] Liquefied refinery gases. *Source: Bureau of Mines*

United States Production of Crude Petroleum In Millions of Barrels

Year	Arkan-sas	Cali-fornia	Colo-rado	Illi-nois	Kan-sas	Louisi-ana	Mich-igan	Missis-sippi	Mon-tana	New Mexico	Okla-homa	Alaska	Texas	Utah	Wyo-ming	Total U. S.
1971	18.3	358.5	27.4	39.1	78.5	935.2	11.9	64.1	34.6	118.4	213.3	79.5	1,223	23.6	148.1	3,454
1972	18.5	347.0	32.0	34.9	73.7	891.8	13.0	61.1	33.9	110.5	207.6	72.9	1,302	26.6	140.0	3,455
1973	18.0	336.1	36.6	30.7	66.2	831.5	14.6	56.1	34.6	101.0	191.2	72.3	1,295	32.7	141.9	3,361
1974	16.5	323.0	37.5	27.6	61.7	737.3	18.0	50.8	34.6	98.7	177.8	70.6	1,262	39.4	140.0	3,203
1975	16.1	322.2	38.1	26.1	59.1	650.8	24.4	46.6	32.8	95.1	163.1	69.8	1,222	42.3	135.9	3,057
1976	18.1	326.0	39.0	26.3	58.7	606.5	30.4	46.1	32.8	92.1	161.4	63.4	1,190	34.3	134.1	2,976
1977	20.2	349.7	39.4	25.7	57.5	562.9	33.0	43.0	32.7	87.1	156.4	169	1,138	32.9	111.8	2,985
1978	20.3	347.2	36.8	23.4	56.6	532.7	34.7	42.0	30.5	83.4	150.5	449	1,074	31.4	137.4	3,178
1979	18.9	352.3	32.3	21.8	57.0	489.7	34.9	37.3	30.0	79.6	143.6	511	1,018	27.7	131.9	3,121
1980[1]	18.2	356.6	29.6	22.9	60.2	467.0	32.8	36.5	29.6	75.5	152.0	592	975	25.7	129.3	3,147

[1] Preliminary. *Source: Bureau of Mines*

Percentage Yields of Refined Products[1] from Crude Petroleum in the United States
Computed on Total Crude Run to Stills

Year	Gasoline	Kerosene	Distillate Fuel Oil	Residual Fuel Oil	Lubri-cants	Jet Fuel	Coke	Asphalt	Petro-Chemical Feedstocks	Still Gas	Liquefied Gases
1971	46.2	2.1	22.0	6.6	1.6	7.4	2.6	3.8	2.7	3.8	2.9
1972	46.2	1.8	22.2	6.8	1.5	7.2	2.8	3.6	2.9	3.9	2.8
1973	45.6	1.7	22.5	7.7	1.5	6.8	2.9	3.6	2.9	3.9	2.8
1974	45.9	1.3	21.8	8.7	1.6	6.8	2.8	3.7	3.0	3.9	2.6
1975	46.5	1.2	21.3	9.9	1.2	7.0	2.8	3.2	2.7	3.9	2.4
1976[2]	45.5	1.1	21.8	10.3	1.3	6.8	2.6	2.8	3.3	3.9	2.4
1977[3]	43.4	1.3	22.6	12.5		6.6					
1978[3]	45.4	1.2	21.6	11.2		6.4					
1979[3]	43.0	1.3	21.5	11.5	1.3	6.9	2.6	3.1	4.7	3.8	2.3
1980[3]	44.5	1.0	19.7	11.7	1.3	7.4	2.7	2.9	5.1	4.0	2.4

[1] Finished products. [2] Preliminary. [3] Estimate. *Source: Bureau of Mines*

PETROLEUM

Stocks of Petroleum & Products in the United States on January 1 In Millions of Barrels

			Refined Products													
						Fuel Oil										
Year	Crude Petroleum	Strategic Reserve	Total	Asphalt[2]	Coke[3]	Distillate	Residual	Finished Gasoline	Petro-Chemical Feedstocks	Jet Fuel	Kerosene	Liquefied Gases (For Fuel)	Lubricants	Road Oil	Wax[4]	Unfinished Oils (Net)[5]
1970	265.2		656.0	16.8	5.2	171.7	58.4	217.4	2.8	28.1	26.8	4.8	14.1	.9	1.0	97.8
1971	276.4		635.5	15.8	5.3	195.3	54.0	214.3	3.6	27.6	27.6	5.4	14.7	.6	1.0	99.0
1972	259.6		677.5	21.2	7.4	190.6	59.7	223.8	3.9	27.7	24.4	7.0	15.0	.9	1.1	100.6
1973	246.4		611.7	21.6	7.8	154.3	55.2	217.1	2.8	25.5	19.1	7.5	13.3	1.3	1.1	94.8
1974	242.5		658.8	15.0	10.0	196.5	53.5	213.4	2.4	28.5	21.0	7.4	12.2	.8	1.0	99.2
1975	265.0		695.0	21.4	5.4	200.1	59.7	221.9	3.5	29.4	15.3	5.8	16.1	1.1	1.2	106.0
1976	271.4		747.9	22.8	7.4	208.8	74.1	238.0	2.9	30.4	15.6	8.4	14.3	.6	.9	106.4
1977	285.5		707.7	19.4	10.6	186.0	72.3	234.3	4.7	32.1	12.5	6.9	12.3	.2	.7	110.5
1978[1]	347.6	7.0	841.8	18.7	10.2	250.3	89.7	260.7	3.9	34.6	18.0	7.5	12.1	.3	.6	113.2
1979[1]	376.3	67.0	784.6	20.9	11.1	216.5	90.2	240.8	4.4	33.7	14.3	7.1	12.2	.3	.8	108.7
1980[1]	339.1	91.0	778.6	18.9	5.2	228.7	95.6	239.9	4.0	38.5	15.8	6.0	12.5	.3	.7	117.7
1981[6]	357.7	107.8	788.8	18.8	4.3	205.4	91.5	264.2	5.9	42.4	11.4	6.4	13.6	.3	.5	126.5
1982[6]	598.8	230.3	712.9	19.5		190.2	78.3	203.0		40.5	11.1		14.2			

[1] Preliminary. [2] 5.5 bbls. = 1 s. ton. [3] 5 bbls. = 1 s. ton. [4] 1 bbl. = 280 lbs. [5] And misc. products. [6] Estimate.
Source: Bureau of Mines

Exports[2] of Petroleum and Products from the United States In Thousands of Barrels[1]

		Refined Products											
					Fuel Oil		Lubricants						
Year	Crude	Total Refined	Finished Gasoline	Kerosene (Incl. Range Oil)	Distillate	Residual	Grease	Oil	Wax	Coke	Asphalt	Liquified Gases	Misc. Oils
1970	4,991	89,467	1,370	121	898	19,785	293	15,797	1,808	30,557	356	9,955	1,071
1971	503	81,342	1,649	181	2,761	13,217	235	15,590	1,660	27,069	306	9,390	1,028
1972	187	81,202	656	91	1,211	12,060	227	14,769	1,130	31,118	333	11,469	1,058
1973	697	83,716	1,664	85	3,231	8,507	251	12,496	965	34,976	340	9,955	1,187
1974	1,074	79,417	1,013	36	855	4,969	277	11,659	879	41,244	410	9,038	1,207
1975	2,146	74,282	850	52	267	5,342	265	8,846	607	37,253	320	9,488	1,124
1976	2,941	78,658	1,297	40	421	4,210	261	9,234	625	37,778	267	8,993	1,112
1977	18,255	70,333	725	23	519	2,305	256	9,388	734	37,393	223	6,483	1,339
1978[3]	57,728	74,329	470	40	1,202	4,634	288	9,399	543	40,438	138	7,238	171
1979[3]	85,707	86,149	155	25	1,079	3,266	279	8,275	836	53,270	181	5,414	163
1980[4]	103,908	94,289	494	32	1,238	12,232	246	8,322	736	49,872	247	7,826	210
1981[4]	83,200	133,900	700		1,900	43,200	7,000						
1982													

[1] 42 gallons per barrel. [2] Includes shipments from Noncontiguous Territories. [3] Preliminary. [4] Estimate.
Source: Bureau of Mines

Imports[2] of Petroleum & Products into the United States In Thousands of Barrels (42 Gallons Per Barrel)

		Refined Products												
				Fuel Oil										
Year	Crude	Total Refined	Asphalt	Distillate	Residual	Finished Gasoline	Jet Fuel	Kerosene	Liquified Pet. Gases	Lubricants	Petrochemical Feedstocks	Special Naphthas	Unfinished Oils	Wax
1970	483,293	725,508	6,201	53,826	557,845	24,320	52,696	1,451	18,921	224	5,352	2,297	39,261	117
1971	613,417	760,949	7,216	55,783	577,700	21,658	65,712	189	25,655	10	5,109	1,824	45,193	93
1972	811,135	847,046	9,263	66,449	637,401	24,787	71,174	526	32,401	669	3,178	863	45,705	335
1973	1,183,996	1,009,992	8,444	143,149	676,225	48.759	77,557	785	48,002	2,091	3,825	88	50,161	1,067
1974	1,269,155	885,200	11,252	105,579	579,157	74,402	59,396	1,744	44,971	1,786	4,364	938	44,228	956
1975	1,498,181	672,197	4,956	56,678	446,528	67,249	48,523	1,073	40,727	1,335	2,061	43	12,985	684
1976	1,935,012	705,256	3,905	53,520	517,325	47,774	27,983	3,163	47,436	1,361	1,370	45	11,735	654
1977	2,397,468	767,925	1,483	90,504	492,581	78,434	27,117	6,869	58,927	3,270	4,954	972	11,239	—
1978[1]	2,319,826	716,868	907	63,288	494,640	69,518	31,346	4,031	40,889	2,978	2,994	1,750	9,913	—
1979[1]	2,355,107	680,825	1,448	70,489	420,144	66,006	28,566	3,298	62,576	3,441	3,934	3,480	21,372	0
1980[3]	1,894,615	566,108	1,414	50,780	336,579	51,071	29,521	3,690	56,711	2,667	10,245	3,354	19,659	0
1981[3]	1,642,800	540,400		61,000	290,600									
1982														

[1] Preliminary. [2] Includes shipments to Noncontiguous Territories. [3] Estimate. *Source: Bureau of Mines*

Crude Petroleum Refinery Operations Ratio[1] In Percent of Capacity

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1969	86	94	92	92	90	92	94	92	92	90	92	94	92
1970	93	93	93	91	86	90	87	89	89	87	89	88	90
1971	88	88	88	86	83	89	88	87	85	85	85	86	86
1972	85	85	85	84	86	89	89	89	91	89	89	91	88
1973	91	90	90	90	90	94	94	93	92	94	91	89	91
1974	84	81	82	85	89	91	91	90	86	87	87	88	87
1975	85	85	83	82	83	86	89	89	89	85	87	88	86
1976	86	88	87	86	87	93	94	91	89	86	90	91	89
1977	89	93	90	89	89	91	91	90	91	89	89	88	90
1978	85	84	85	83	89	88	88	91	90	89	91	90	88
1979	80	84	83	84	84	86	87	86	84	83	84	85	85
1980	82	81	78	76	75	77	74	73	74	71	73	76	76
1981	72	71	68	66	67	68	67	71	68	67	68	69	69

[1] Based on the ratio of the daily average crude runs to stills to the rated capacity of refineries per day. *Source: Bureau of Mines*

Average Price of Crude Petroleum at Wells[1] Index (1967 = 100)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1973	114.7	114.7	114.9	117.1	122.0	125.3	125.8	125.8	133.3	133.3	139.3	146.2	126.0
1974	178.4	201.7	201.7	201.7	201.7	201.7	224.4	225.2	225.4	236.2	231.0	223.0	211.8
1975	223.1	228.6	230.2	232.2	234.2	256.0	250.4	256.1	256.1	257.8	261.0	262.6	245.7
1976	263.3	242.3	242.5	245.0	246.0	248.1	254.3	254.3	254.3	264.4	264.4	264.4	253.6
1977	262.9	274.2	270.0	271.0	271.0	271.8	270.8	273.3	276.1	278.6	282.9	288.1	274.2
1978	288.8	289.7	293.4	294.3	295.5	298.9	301.9	302.7	305.7	307.5	310.5	312.4	300.1
1979	316.4	322.3	324.2	326.2	335.7	356.4	370.6	385.7	422.1	436.7	450.4	470.8	376.5
1980	513.6	515.1	522.8	533.9	540.1	549.0	551.4	566.8	571.3	579.6	600.6	632.8	556.4
1981	704.4	842.7	842.8	842.5	839.9	815.9	798.9	796.8	797.0	788.4	786.0	787.4	803.6
1982	787.4												

[1] Buyers posted prices. *Source: Bureau of Labor Statistics*

Average Wholesale Prices of Gasoline[1] (Regular Grade—Leaded) Index (Feb. 1973 = 100)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1974	136.7	147.0	161.4	172.1	177.3	188.5	196.6	196.1	197.4	196.2	186.7	184.9	178.4
1975	187.0	189.1	191.1	193.3	199.0	206.8	215.5	228.9	233.7	235.1	233.0	229.5	211.8
1976	227.3	226.4	221.7	219.1	220.6	229.2	239.4	243.2	245.0	244.7	243.8	242.2	233.6
1977	239.9	240.4	245.6	249.5	254.5	258.9	261.2	260.5	259.6	257.5	256.3	255.8	253.6
1978	255.1	252.8	252.0	253.0	255.5	260.5	266.4	271.3	275.1	278.1	277.5	282.7	265.0
1979	287.0	292.3	299.9	313.0	331.6	349.3	371.0	397.7	422.1	439.2	488.3	459.6	367.6
1980	481.1	517.5	560.4	585.4	595.5	598.6	601.1	602.9	599.6	591.5	590.8	596.1	576.7
1981	607.5	632.9	683.2	694.7	690.4	685.6	677.4	668.4	668.1	667.8	663.3	659.3	666.6
1982	653.4												

[1] Excludes aviation. *Source: Bureau of Labor Statistics* (0571-02)

Average Retail Price of Gasoline[1] (Regular—Excl. Taxes[2]) 55 Cities In Cents Per Gallon

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1974	32.8	36.1	38.1	39.6	41.7	43.5	43.6	43.7	43.0	40.9	40.7	41.2	40.4
1975	42.3	42.2	42.5	42.8	43.8	45.2	47.4	48.0	48.0	48.1	47.6	47.6	45.5
1976	46.8	46.2	45.6	45.2	46.1	47.9	48.5	48.7	48.7	48.7	48.6	48.3	47.4
1977	48.4	48.8	49.6	50.3	51.0	51.7	51.7	51.7	51.5	51.8	51.3	51.1	50.7
1978	51.2	51.1	51.0	51.2	51.7	52.4	53.3	54.2	54.5	54.7	55.4	56.4	53.1
1979[2]	68.4	70.0	73.2	77.2	81.4	87.8	93.1	96.8	99.0	99.8	101.1	105.1	87.8
1980	112.7	119.0	122.6	122.9	123.4	123.7	123.5	123.3	122.1	121.7	122.0	123.3	121.7
1981	127.8	137.2	138.4	140.0	139.8	139.8	139.8	139.7	139.8				
1982													

[1] Excludes aviation—mid-month. [2] Beginning 1979, prices includes taxes. *Source: U.S. Dept. of Commerce*

PETROLEUM

Production[1] of Crude Petroleum in the United States In Millions of Barrels of 42 Gallons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1969	275.5	250.0	280.7	277.2	290.0	288.9	288.2	281.1	278.9	285.6	280.4	295.4	3,372
1970	293.8	268.0	294.7	287.7	295.2	280.8	285.2	296.4	295.6	310.4	301.3	308.3	3,517
1971	299.3	272.4	302.8	293.1	299.0	288.1	293.2	291.7	274.1	284.0	274.2	282.1	3,454
1972	282.5	270.7	293.3	285.4	298.0	285.6	294.4	294.0	285.2	293.9	282.8	289.4	3,455
1973	284.5	263.1	287.4	278.8	287.1	276.4	285.7	284.2	272.0	285.9	274.8	281.0	3,361
1974	277.0	256.0	277.9	268.6	276.2	263.4	272.2	269.7	253.3	266.9	257.1	264.3	3,203
1975	262.1	240.6	263.3	253.7	259.7	252.6	258.4	255.7	248.4	258.1	248.3	255.9	3,057
1976	255.2	238.7	255.2	242.3	251.9	242.8	251.9	251.4	244.5	250.0	242.4	249.9	2,976
1977	243.5	227.9	250.8	244.3	250.3	243.1	251.2	257.5	254.4	265.8	257.4	263.1	3,009
1978	259.2	234.5	270.3	264.5	273.6	265.0	271.4	271.5	264.0	273.4	262.2	268.5	3,178
1979[2]	262.2	238.0	266.1	256.0	266.1	252.3	259.0	269.7	254.0	265.6	259.5	267.0	3,121
1980[2]	268.1	252.2	270.1	260.6	267.8	256.4	265.2	261.1	258.6	264.6	254.9	266.8	3,146
1981[2]	264.5	240.8	266.6	256.3	263.4	258.5	261.1	265.9	257.6	264.8	257.8	267.3	3,125

[1] Represents oil transported from producing properties, plus that remaining on properties & consumed on leases. [2] Preliminary.
Source: Bureau of Mines

Stocks of Crude Petroleum[1] in the United States at Beginning of Month In Millions of Barrels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1969	272.2	279.5	265.3	264.2	273.2	281.3	284.5	277.5	267.7	262.5	264.3	264.8
1970	265.2	267.1	269.6	274.6	278.0	284.8	279.9	266.9	254.1	259.2	265.5	271.3
1971	276.4	269.8	266.9	267.2	271.4	284.3	279.3	273.2	272.4	269.8	265.9	265.2
1972	259.6	251.0	252.9	258.9	266.6	279.5	271.4	265.8	258.0	250.8	253.7	251.3
1973	246.4	237.5	235.4	244.1	248.8	257.9	248.9	243.7	248.3	241.3	246.3	250.0
1974	242.5	233.0	240.7	244.7	256.4	269.5	268.8	268.7	264.8	266.7	269.4	271.1
1975	265.0	270.5	276.8	280.0	281.9	281.0	276.1	264.2	256.6	259.4	269.6	271.0
1976	271.4	289.3	277.4	283.1	286.6	284.0	281.7	282.6	277.3	284.4	297.7	298.8
1977	285.5	294.1	291.5	299.5	318.9	328.8	333.7	335.3	338.9	334.1	343.2	350.3
1978	347.7	352.5	350.2	363.9	365.2	354.7	363.5	368.2	357.8	368.3	378.2	381.4
1979[2]	376.3	375.9	381.1	399.9	403.6	403.2	414.5	403.0	411.9	415.0	435.9	438.6
1980[2]	430.3	444.8	452.8	452.9	470.5	475.1	473.2	470.5	478.8	468.8	475.1	475.4
1981[2]	482.9	488.9	502.8	518.1	541.4	552.3	555.3	565.6	549.9	560.7	584.3	594.8
1982[2]	598.8											

[1] Total gasoline-bearing in the U.S. [2] Preliminary. *Source: Bureau of Mines*

United States Production of Gasoline[1] In Millions of Barrels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1969	159.2	151.6	163.9	154.3	167.1	166.0	177.8	179.6	174.3	177.1	175.3	182.1	2,028
1970	176.5	157.0	173.4	164.3	172.5	173.8	180.6	183.0	180.8	177.7	175.6	190.2	2,105
1971	185.2	167.0	180.8	170.4	174.3	181.4	192.7	196.6	186.1	188.2	183.1	196.9	2,203
1972	192.6	175.2	184.9	176.8	188.6	189.1	206.7	206.2	199.8	204.6	194.9	200.7	2,320
1973	197.9	173.0	192.2	192.9	209.8	211.3	218.3	215.4	200.2	207.1	193.2	190.4	2,402
1974	184.2	168.2	186.5	190.5	197.7	201.4	212.2	213.0	195.6	197.8	190.1	200.1	2,338
1975	203.0	176.7	189.2	182.3	191.1	201.2	218.5	214.6	206.0	200.3	199.4	211.3	2,394
1976	201.8	188.6	201.2	197.8	211.1	220.6	223.9	223.3	207.8	208.1	209.3	223.5	2,517
1977	215.7	191.6	213.9	210.2	216.7	215.8	226.3	224.3	213.4	215.9	214.9	222.6	2,518
1978	215.8	186.5	210.1	201.2	220.1	217.8	226.6	232.7	223.4	223.6	228.7	243.9	2,631
1979[2]	226.8	195.3	207.4	204.4	211.9	211.4	219.1	215.4	200.8	202.9	201.2	218.0	2,515
1980[2]	217.5	200.2	203.5	189.5	196.6	198.1	201.7	201.4	192.4	191.2	194.9	206.9	2,394
1981[2]	208.2	176.6	193.3	184.2	190.9	187.8	200.2	206.3	198.1	200.9	198.3	206.0	2,351
1982													

[1] Gasoline and naphtha from crude petroleum and natural gasoline used at refineries. [2] Preliminary. *Source: Bureau of Mines*

United States Domestic Consumption of Gasoline In Millions of Barrels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1969	158.4	145.2	159.7	168.7	177.7	173.1	188.4	185.0	171.0	177.2	163.6	174.5	2,043
1970	163.9	151.0	173.4	171.3	183.6	187.4	195.2	190.4	179.8	184.8	168.4	182.0	2,131
1971	164.6	154.6	182.6	187.6	184.5	195.1	201.0	197.0	183.6	188.6	184.6	189.3	2,213
1972	173.2	166.9	200.5	190.0	201.2	206.2	208.4	216.6	194.9	198.5	195.5	198.8	2,351
1973	190.9	181.5	203.2	197.5	215.7	210.3	218.9	226.9	198.7	208.6	206.0	194.5	2,453
1974	181.2	171.7	192.7	195.0	210.4	209.1	217.1	220.7	193.0	209.7	197.6	204.3	2,402
1975	193.4	171.7	197.1	202.7	214.1	213.5	219.7	218.6	203.2	211.5	192.8	212.0	2,450
1976	199.2	182.5	214.7	215.9	213.5	226.0	228.0	223.7	213.5	215.9	212.2	222.2	2,567
1977	201.4	194.1	215.3	221.5	219.1	229.3	232.3	231.4	220.8	222.1	216.8	229.5	2,634
1978	208.0	193.4	226.2	217.2	240.8	238.7	236.2	245.6	223.3	232.2	226.0	231.9	2,720
1979[1]	214.4	204.3	225.0	213.1	224.5	216.9	213.8	228.9	207.7	218.8	204.4	209.5	2,582
1980[1]	197.2	192.3	199.7	204.9	209.7	201.0	210.0	207.3	196.5	207.8	188.1	206.3	2,421
1981[1]	198.8	176.9	195.4	198.6	205.7	211.2	212.5	207.2	200.5	205.5	192.5	208.9	2,415
1982													

[1] Preliminary. *Source: Bureau of Mines*

Stocks of Finished Gasoline on Hand in the United States, at End of Month In Millions of Barrels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1969	214.5	222.6	229.2	216.6	207.7	201.8	193.1	189.4	194.3	195.0	208.4	217.4
1970	231.8	238.8	240.8	235.7	226.4	214.9	201.9	196.4	199.3	194.5	204.0	214.3
1971	237.0	250.5	250.6	235.0	226.2	214.0	207.2	208.4	212.3	212.9	213.6	223.8
1972	244.6	254.8	241.2	229.5	219.2	204.3	204.7	196.8	203.7	211.7	213.2	217.1
1973	226.0	220.0	211.1	208.2	205.3	211.6	215.0	208.6	213.9	218.2	211.4	213.4
1974	221.3	223.0	223.6	226.8	221.9	220.5	222.2	222.1	230.7	224.1	221.9	221.9
1975	228.3	245.9	255.4	252.1	235.7	217.0	210.0	215.2	218.4	229.2	224.5	235.3
1976	238.0	243.4	251.8	241.9	226.6	227.5	227.7	229.4	233.2	232.6	229.1	230.5
1977	234.3	255.5	258.1	264.7	261.5	265.3	259.1	260.9	259.6	258.7	258.0	261.5
1978	260.7	275.1	273.7	262.0	251.4	235.9	222.0	219.0	211.5	219.2	216.1	223.2
1979[1]	240.8	254.4	241.9	237.9	229.7	232.0	244.1	235.2	232.3	211.0	223.3	239.9
1980[1]	264.9	277.3	285.8	275.0	266.0	267.5	263.8	262.2	261.0	249.1	259.9	213.5
1981[1]	229.5	232.3	234.5	225.2	215.0	196.3	187.7	190.6	193.2	192.9	202.9	205.8
1982												

[1] Preliminary. *Source: Bureau of Mines*

U.S. Production of Residual Fuel Oil and Distillate Fuel Oils In Millions of Barrels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1969	97.3	91.5	99.3	90.3	88.5	90.7	93.1	90.2	88.4	90.0	93.9	101.0	1,114
1970	105.5	95.8	101.3	90.6	88.5	89.3	91.2	95.5	93.3	96.7	97.5	109.3	1,155
1971	112.2	99.4	104.5	98.9	94.1	96.8	97.8	97.1	91.0	94.5	94.5	106.0	1,187
1972	107.4	104.9	105.3	96.6	100.9	98.6	99.4	101.1	100.1	107.6	108.4	126.1	1,256
1973	128.5	111.4	112.4	101.7	108.3	112.2	112.8	113.3	110.7	120.8	119.5	133.2	1,385
1974	122.5	96.0	97.3	105.2	114.7	114.3	119.3	117.0	107.6	117.8	120.9	132.1	1,365
1975	132.3	112.9	118.8	111.9	111.1	111.8	116.1	115.9	119.9	121.2	119.4	128.3	1,420
1976	128.7	126.3	127.2	118.2	123.9	123.8	131.1	133.3	128.3	134.8	142.8	155.8	1,574
1977	163.1	158.2	151.7	140.5	149.2	147.3	152.9	152.1	151.8	158.4	151.0	160.0	1,836
1978	153.0	133.0	147.8	135.2	152.0	140.4	146.0	152.7	144.7	150.8	150.9	158.5	1,765
1979[1]	152.3	130.4	146.0	137.4	144.2	140.1	151.4	152.6	150.1	150.6	150.0	158.6	1,766
1980[1]	148.5	131.9	128.5	121.6	123.3	126.6	129.3	121.1	125.5	127.2	128.3	141.2	1,552
1981[1]	142.6	122.5	121.1	112.1	114.0	112.0	110.9	120.4	116.9	115.4	118.4	128.9	1,435
1982													

[1] Preliminary. *Source: Bureau of Mines*

Plastics

In 1982, plastics materials shipments, measured in 1972 dollars, were expected to increase by about 7 percent if economic conditions improved. Recovery to the 1979 production level of 42 billion pounds was possible. Many of the problems that existed in 1981 were expected to persist in 1982, however.

The industry's performance was expected to depend on activity in the housing and auto industries. Increased activity in housing also would stimulate demand for complementary products such as furniture and appliances, which consume substantial amounts of plastics. Stronger markets in defense products is another factor that many affect the synthetic resin industry in 1982.

Total U.S. production of plastics materials reached a record of 41.9 billion pounds in 1979 but fell 9 percent in 1980, to about 38 billion pounds.

The plastics materials industry is capital intensive. Expenditures for new facilities and equipment amounted to more than $1 billion in 1979. Capacity utilization in plastics materials plants continued to suffer in 1981, although production was about 5 percent higher than in 1980. Actual capacity utilization, as in 1980, ranged from 70 percent for PVC to 77 percent for high density polyethylene (HDPE). In contrast, 1979 capacity utilization was 84 percent for PVC and 89 percent for HDPE. By early 1982, some producers had withdrawn expansion plans because present capacity was underutilized. Others were reportedly shutting down obsolete capacity.

Weak markets for plastics materials in 1981 prevented producers from passing increased costs on to consumers. In many cases, producers are reported to have sold plastics materials at discounts in order to retain their shares of the market. This practice kept price increases moderate, but it also reduced profits. This combination of lagging production, weak markets, and reduced earnings may lead to elimination of some producers.

The plastics materials industry made strong efforts in 1980 to increase exports in order to improve profits. U.S. exports of plastics materials in 1980 were valued at $2.7 billion, in current dollars, close to 24 percent higher than those of 1979. In 1981, however, efforts to increase exports did not succeed, and exports declined by 7 percent.

Major Markets

A survey by the Society of the Plastics Industry that was cited by the government found that the packaging industry was the largest market for synthetic resins, accounting for 26.7 percent of consumption in 1979. The building and construction industry ranked next with 19.6 percent of the total, followed by the consumer and institutional sectors with 9.7 percent, and electrical/electronic uses, which accounted for 7.9 percent. Other domestic markets included adhesives-inks-coatings, 7.2 percent; transportation, 5.0 percent (up 60 percent in sales from 1975); furniture (excluding polyurethane), 4.9 percent; and machinery, 1.3 percent. All other domestic uses accounted for 8.9 percent, and exports for 8.8 percent of the total demand for synthetic resins.

In addition, there is the "plastics products" industry. The miscellaneous "plastics products" industry is, as its name suggests, a residual statistical creation encompassing plastics products not reported in other industries or not consumed within the companies that produce them. Seven major product groups (markets or processes) account for almost 75 percent of the value of shipments of plastics products; these are: (1) film and sheeting, (2) consumer and commercial products, (3) packaging, (4) building and construction products, (5) transportation products, (6) electrical and electronic products, and (7) laminated products. Each of these groups represents a large number of individual products having generally similar market strengths and potential. The industry accounts for about half of the total consumption of plastics and resins in the U.S. Its growth rate is indicative of total plastics products output and use.

Government Regulations

The recent deregulation of crude oil prices and the expected deregulation of natural gas prices eventually will affect energy and feedstock costs for plastics producers. As a result, certain plastics, such as polyester resins, polystyrene, and PVC, may be less competitive in international markets.

EPA and OSHA regulations that limit exposure to proven and suspected carcinogens raise producer costs by requiring them to install new ventilation and protective systems. Consumer Product Safety Commission regulations may ban formaldehyde, a suspected carcinogen. This would prevent the use of ureaformaldehyde resins in insulation for housing and in adhesives for plywood and particle board.

World Production of Plastics and Resins[3] (Condensation, Polymerization, Etc.) In Thous. of Metric Tons

Year	Australia	Austria	Czechoslovakia	France	Germany		Italy	Japan	Netherlands	Poland	Belgium	Hungary	USSR	United Kingdom	United States
					East	West									
1972	290	233	400	1,562	458	5,471	2,176	5,573	1,080	299	626	509	2,040	1,631	12,046
1973	378	276	452	1,928	490	6,434	2,479	6,392	1,314	427	773	592	2,304	2,520	13,706
1974	402	286	390	2,060	517	6,271	2,468	6,722	1,644	395	835	701	2,496	2,419	13,764
1975	362	304	427	1,256	605	5,046	2,052	4,373	1,350	539	660	164	2,844	2,057	10,199
1976	407	404	580	1,769	679	6,444	2,266	4,952	1,723	559	824	186	3,216	2,556	13,261
1977	480	430	738	1,834	734	6,270	2,538	4,978	1,783	583	1,471	144	3,300	2,710	11,232
1978	522	434	810	1,885	762	6,703	2,466	5,882	1,962	596	1,682	209	3,516	2,621	12,380
1979	618	437	853	2,220	779	7,255	2,562	6,964	2,012	571	1,969	289	3,504	2,647	13,866
1980[1]	709	487	894	2,052	859	6,710	2,464	6,422	1,975	667	1,835	324	3,636	2,257	12,418
1981[2]	700	500	900	1,950	982	6,500	2,300	6,250	2,393	640	1,800	312	3,700	2,000	13,000

[1] Preliminary [2] Estimate [3] Refers to production of thermoplastic & thermosetting resins & plastic materials obtained by chemical transformation of natural organic substances or by chemical synthesis. *Source: United Nations*

Production of Important Synthetic Plastics & Resin Materials in the U.S. In Millions of Pounds

Year	Phenolic Resins	Polyethylene & Copolymers	Polypropylene	Polystyrene & Copolymers	Polyvinyl Chloride & Copolymers
1969	1,181	5.490	1,090	3,343	3,032
1970	1,186	5,844	1,031	3,550	3,756
1971	1,181	6,381	1,339	3,990	4,103
1972	1,441	7,656	1,731	4,890	4,322
1973	1,648	8,582	2,165	5,156	4,594
1974	1,598	8,826	2,249	5,060	4,744
1975	1,275	7,483	1,903	3,877	3,695
1976	1,305	8,775	2,551	4,743	4,545
1977	1,797	10,100	2,706	5,203	5,267
1978	1,926	11,359	3,055	5,989	5,878
1979	1,779	12,408	3,824	6,327	6,211
1980	1,745	11,720	3,699	5,540	5,485
1981[1]	1,489	11,998	3,948	5,687	5,663
1982					

Note: Data included in the table does not cover all Plastics production. Various types of Plastics production of lesser importance are not included because statistics are not available on a consistent basis. Also, many individual firms do not make their production figures known. [1] Preliminary. *Sources: U.S. Tariff Commission, Bureau of Census*

Average Wholesale Price Index of Plastic Materials in the United States (1967 = 100)

Plastic Resins and Materials (066)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1979	204.2	206.3	210.9	220.6	228.5	230.1	244.5	250.1	252.0	260.0	261.4	262.5	235.9
1980	270.4	272.1	274.5	287.6	288.4	287.6	285.7	281.5	276.5	276.1	276.2	274.1	279.2
1981	274.7	276.1	279.4	285.1	287.9	290.0	295.9	297.5	296.8	299.5	293.2	297.0	289.2
1982	293.8	295.9	286.8										

PE Resin, Low, Pkg. Firm (0662-0301.99)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1976	178.2	178.4	178.6	190.7	191.5	192.2	193.3	193.2	190.9	189.7	189.9	190.1	188.1
1977	187.7	185.2	189.5	197.7	197.1	196.9	194.8	194.8	194.0	195.2	195.6	195.2	193.6
1978	196.1	196.1	197.0	198.0	198.6	198.0	194.4	190.3	189.3	187.2	184.1	184.1	192.8
1979	186.6	186.9	186.9	203.3	210.1	213.2	225.2	225.0	225.8	243.2	247.0	249.0	216.9
1980	257.2	260.9	N.A.	275.1	270.8	264.0	259.4	254.4	249.4	249.3	251.8	250.9	258.5
1981	251.5	251.2	251.5	263.0	263.0	263.7	280.7	278.3	279.8	279.9	222.3	251.6	242.9
1982	N.A.	N.A.	211.8										

Polystyrene Resin, G. P. (0662-0601.99)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1977	182.7	181.8	181.1	174.9	175.6	175.4	180.5	180.7	181.7	181.8	183.4	183.3	180.2
1978	183.3	183.3	183.3	N.A.	N.A.	N.A.	194.4	194.4	195.4	194.9	194.9	194.5	190.9
1979	205.2	N.A.	210.4	228.5	224.1	N.A.	254.6	269.1	311.2	310.1	312.8	313.9	264.0
1980	321.0	N.A.	326.9	331.6	340.9	337.1	331.3	330.0	318.3	323.2	323.0	325.1	328.0
1981	320.6	N.A.	328.2	335.9	338.0	344.0	351.4	N.A.	349.9	354.8	N.A.	N.A.	340.4
1982	N.A.	N.A.	N.A.										

Polystyrene Resin, Rubber Modified (0662-0602.99)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1976	165.7	174.4	173.2	175.4	176.1	174.9	175.4	174.4	165.7	162.8	162.3	162.5	170.3
1977	162.5	162.1	161.6	157.1	157.2	158.8	161.9	161.7	162.8	163.2	164.4	164.6	161.5
1978	164.6	164.6	164.6	168.3	170.2	N.A.	171.6	171.6	172.7	171.7	171.7	172.1	169.4
1979	180.8	N.A.	N.A.	200.8	213.7	N.A.	220.9	236.7	272.9	272.6	273.3	274.9	238.5
1980	283.5	N.A.	278.8	291.4	291.9	293.2	288.0	287.6	282.1	286.0	287.3	289.4	288.0
1981	290.0	290.8	291.7	295.4	299.2	305.2	303.4	N.A.	N.A.	292.6	298.9	N.A.	296.0
1982	N.A.	N.A.	N.A.										

PVC Resin, G. P. (0661-0106.10)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1976	170.4	180.1	180.1	180.1	179.4	180.1	187.6	186.7	186.7	185.9	185.9	183.9	182.2
1977	176.2	179.0	179.1	182.4	184.3	187.1	190.9	193.8	195.8	193.9	191.3	188.1	186.8
1978	187.0	186.8	187.5	188.4	190.0	193.5	195.4	195.5	194.3	193.4	191.7	196.1	191.6
1979	198.0	203.4	210.7	212.6	216.9	219.0	225.1	232.1	231.0	244.1	246.8	245.5	223.8
1980	251.4	256.2	256.2	264.9	263.7	261.4	255.5	245.2	218.9	216.2	217.0	215.0	243.5
1981	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
1982	N.A.	N.A.	N.A.										

Phenolic Molding Compound (0663-0201.99)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1976	187.9	187.9	187.9	187.9	187.9	187.9	191.2	195.2	198.6	202.0	202.0	202.0	193.2
1977	202.0	202.0	202.0	205.4	205.4	202.0	202.0	202.0	202.0	202.0	202.0	203.8	202.7
1978	202.0	194.6	195.1	195.1	195.1	195.1	195.1	195.1	192.8	184.9	185.5	185.5	193.0
1979	185.5	185.5	200.3	221.6	230.2	230.2	234.9	233.9	236.0	239.7	242.5	239.7	223.3
1980	239.7	239.7	244.3	249.9	251.3	251.3	250.4	240.2	240.2	240.2	240.2	240.2	244.0
1981	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	254.2	254.2	254.2	254.2	254.2	254.2	254.2
1982	254.2	N.A.	N.A.										

Source: Bureau of Labor Statistics

Platinum and Group Metals

World production of platinum-group metals in 1981 was about 6.78 million troy ounces, only 1 percent below estimated 1980 output, according to preliminary data of the U.S. Bureau of Mines. The Republic of South Africa and the Soviet Union accounted for about 94 percent of the world total.

Secondary U.S. production of platinum-group metals in 1981 amounted to 407,316 ounces, up 22 percent from 1980. Recovery of platinum increased 18 percent from 1980 to 182,496 ounces. Palladium recovery rose 26 percent to 207,454 ounces.

Most of the annual U.S. requirements for primary platinum-group metals are accounted for by imports. Imports for consumption in 1981 totaled 2.85 million troy ounces, 19 percent lower than in 1980. The principal import sources were the Republic of South Africa—57 percent; the U.S.S.R.—13 percent; and the United Kingdom—11 percent.

Consumption of platinum-group metals in the U.S., as indicated by sales to domestic industries, decreased 18 percent in 1981 to 1.81 million ounces (excluding companies reporting annually). Platinum sales were off 24 percent and palladium sales were off 11 percent from 1980 levels. In 1981, the automotive industry accounted for about 54 percent of U.S. platinum sales; electrical—12 percent; and petroleum—11 percent. The electrical industry accounted for over 39 percent of U.S. palladium sales in 1981; dental and medical—24 percent; and automotive—14 percent. Platinum and palladium accounted for 47 percent and 45 percent, respectively, of total platinum-group sales in 1981. Use in automobile exhaust converters as catalysts was again the largest single end use for platinum-group metals in 1981 in the United States.

U.S. exports of platinum-group metals in 1981 increased 13 percent to 863,000 troy ounces, according to the U.S. Bureau of Mines. The major recipient country was Japan, which accounted for 39 percent of total exports. (Japan is historically one of the most important platinum-consuming countries in the world, with jewelry accounting for about 60 to 70 percent of total consumption of platinum in that country.) The United Kingdom accounted for 17 percent of U.S. exports of platinum-group metals in 1981, and Switzerland—13 percent.

Stocks of platinum-group metals held by refiners, importers, and dealers in the U.S. at the end of 1981, were 2 percent lower than a year earlier. Platinum stocks of 435,515 ounces were 13 percent below the December 31, 1980 level. Palladium stocks of 401,169 ounces were 11 percent above a year earlier.

As of November 30, 1981, the nation's stockpile goal for platinum was 1.3 million ounces and the inventory was about 453,000 ounces. The palladium stockpile goal was 3.0 million ounces and the inventory was about 1.25 million ounces.

The platinum producers' price remained at $475 per troy ounce throughout 1981, but the palladium producers' price dropped from $200 per ounce to $110 by late 1981. Dealer prices for both metals were at their highest levels for 1981 in the first week of January, at $565 per ounce for platinum and $142 per ounce for palladium. By the end of 1981 these prices had dropped to $397 and $70 per ounce.

Futures Markets

Both platinum and palladium futures are traded on the New York Mercantile Exchange (NYMEX).

World Production of Platinum-Group Metals In Troy Ounces

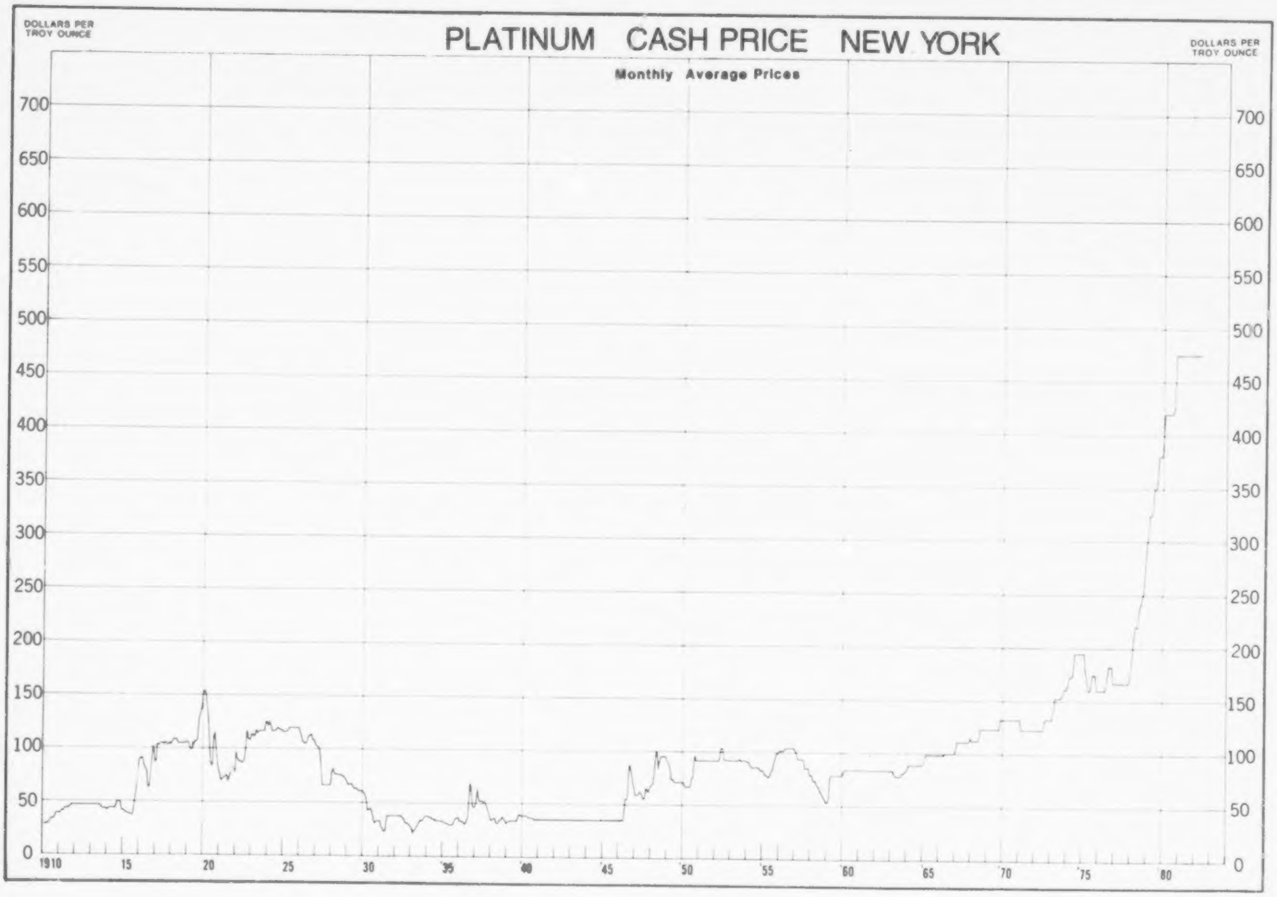
Year	Australia	Philippines	Finland	Canada	Colombia[3]	Ethiopia	Japan	South Africa	U.S.S.R.	United States	Yugoslavia	World Total[1]
1971	—	2,459	600	475,169	25,610	217	8,826	1,253,200	2,300,000	18,029		4,084,110
1972	—	7,522	650	406,048	24,111	248	9,899	1,453,000	2,350,000	17,112		4,269,990
1973	975	6,656	725	354,223	26,358	235	10,197	2,362,800	2,450,000	19,980		5,232,149
1974	1,120	3,665	650	384,618	21,094	230	15,205	2,830,000	2,500,000	12,657		5,769,239
1975	1,830	1,415	600	399,218	22,114	162	19,401	2,600,000	2,650,000	18,920		5,713,660
1976	11,570	—	600	416,821	16,779	145	26,795	2,700,000	3,050,000	6,116	N.A.	6,228,826
1977	13,503		670	465,371	17,300	100	32,453	2,870,000	3,100,000	5,545	5,690	6,510,632
1978	10,653		670	346,213	13,939	123	34,397	2,860,000	5,050,000	8,246	5,979	6,330,220
1979	9,845		590	197,943	12,932	108	34,637	3,017,000	3,200,000	7,300	5,915	6,486,270
1980[2]	9,850		590	404,585	13,000	123	42,600	3,100,000	3,250,000	3,348	6,000	6,830,093
1981[1]				350,000				3,100,000	3,250,000	6,000		6,780,000

[1] Estimate. [2] Preliminary. [3] Placer platinum. *Source: Bureau of Mines*

Average Price of Palladium (Dealer Prices)[1] In Dollars Per Troy Ounce

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1975	124.32	105.00	93.92	90.50	73.27	57.71	55.86	58.30	50.52	47.60	44.00	44.00	70.42
1976	42.00	39.62	37.56	38.50	41.58	48.50	55.75	50.28	53.25	52.99	59.20	52.38	47.63
1977	54.06	58.10	57.82	55.20	52.97	45.18	44.90	42.36	42.20	43.07	48.83	51.97	49.72
1978	55.10	64.86	64.18	59.33	60.82	60.42	59.53	61.86	60.09	71.58	70.74	73.25	63.48
1979	76.14	103.35	95.56	93.97	105.53	124.33	121.40	117.45	136.94	143.63	141.95	163.42	118.62
1980	220.00	262.80	259.83	194.79	169.74	169.56	199.55	203.88	212.74	204.72	185.85	155.69	203.10
1981[2]	225	225	225	225	225	140	110	110	110	110	110	110	166.70
1982[2]	110	110	110										

[1] Based on wholesale quantities, prompt delivery. [2] Estimate. *Source: American Metal Market*

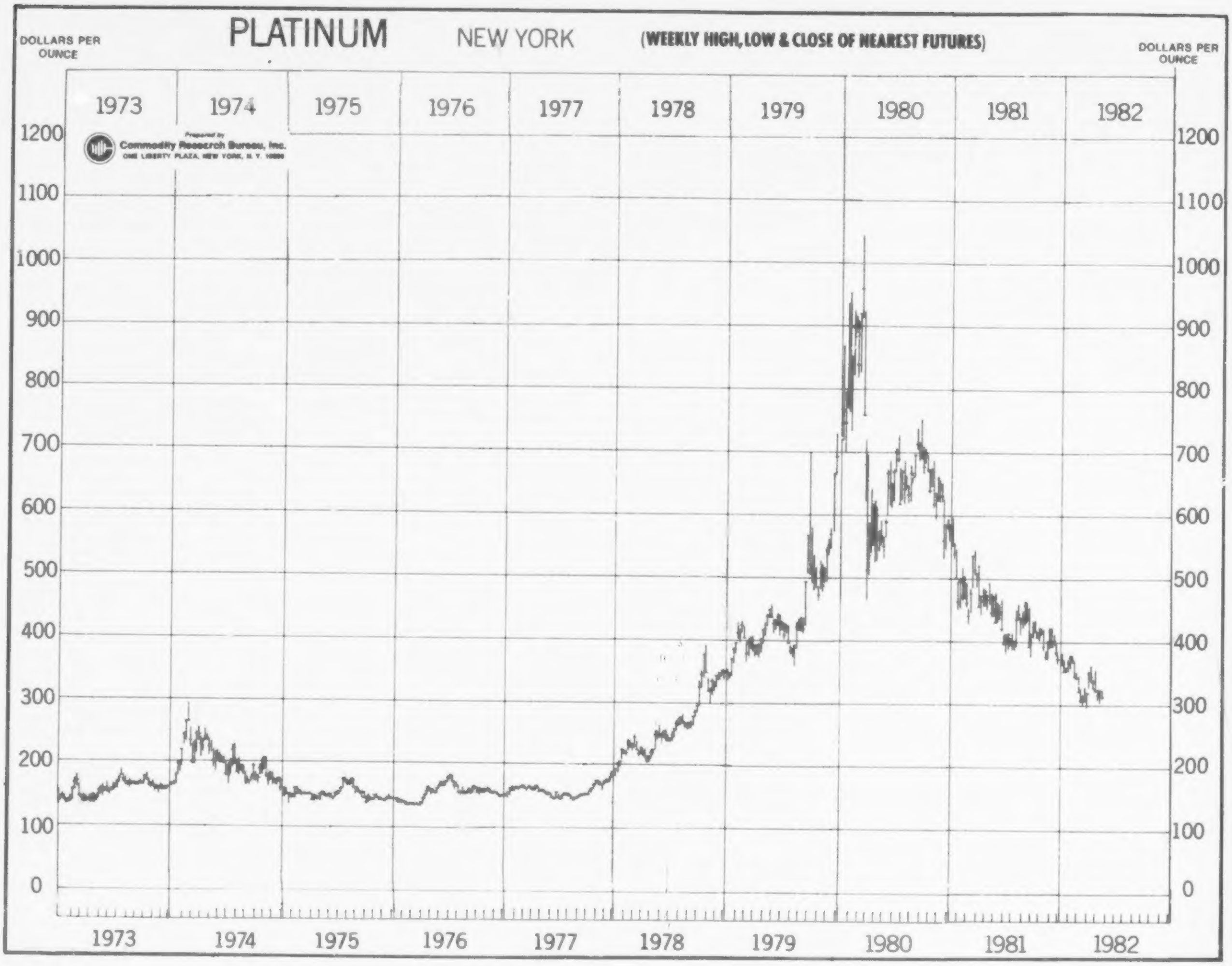


Average Price of Platinum (Producer Prices) in New York In Dollars Per Troy Ounce

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1969	122.50	122.50	122.50	122.50	122.50	122.50	122.50	122.50	122.50	122.75	132.50	132.50	124.18
1970	132.50	132.50	132.50	132.50	132.50	132.50	132.50	132.50	132.50	132.50	132.50	132.50	132.50
1971	129.00	122.50	122.50	122.50	122.50	122.50	122.50	122.50	122.50	122.50	122.50	122.50	123.04
1972	122.50	122.50	122.50	122.50	122.50	122.50	128.00	132.50	132.50	132.50	132.50	132.50	127.13
1973	132.50	141.97	152.50	152.50	152.50	152.50	152.50	152.50	155.24	160.50	160.50	160.50	152.18
1974	162.68	172.50	172.50	172.50	174.55	195.00	195.00	195.00	195.00	195.00	195.00	195.00	184.98
1975	195.00	180.53	175.00	163.06	160.00	160.00	162.73	175.00	175.00	172.17	160.00	160.00	169.87
1976	160.00	160.00	160.00	160.00	160.00	163.54	175.60	182.50	182.50	182.50	167.00	167.00	168.39
1977	167.00	167.00	167.00	167.00	167.00	167.00	167.00	167.00	167.00	167.00	167.65	174.81	167.71
1978	186.55	206.58	217.07	220.00	220.00	227.73	237.89	241.74	250.23	253.18	284.00	300.00	237.08
1979	303.41	325.00	325.00	327.38	350.00	350.00	350.00	357.83	380.00	380.00	380.00	393.33	351.83
1980	420.00	420.00	420.00	420.00	420.00	420.00	420.00	425.24	475.00	475.00	475.00	475.00	436.77
1981	475.00	475.00	475.00	475.00	475.00	475.00	475.00	475.00	475.00	475.00	475.00	475.00	475.00
1982	475.00	475.00	475.00	475.00									
1983													

Source: American Metal Market

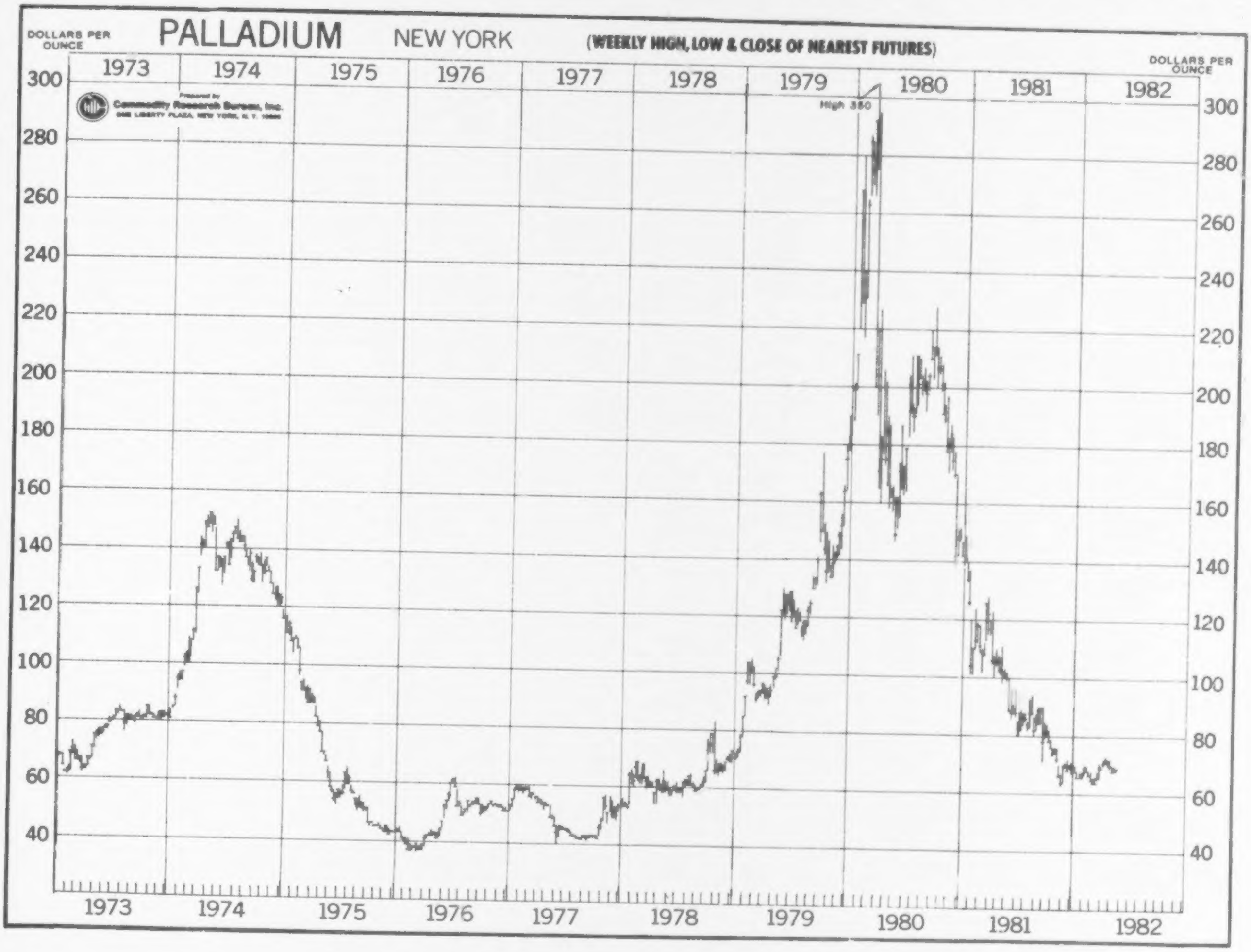
PLATINUM AND GROUP METALS



Platinum-Group Metals Sold to Consuming Industries in the United States In Thousands of Troy Ounces

Year	Automotive		Chemical		Electrical		Dental & Medical		Jewelry & Decorative		Petroleum		All Platinum-Group Metals			
	Platinum	Others[2]	Platinum	Others[2]	Platinum	Others[2]	Platinum	Others[2]	Platinum	Others[2]	Platinum	Others[2]	Platinum	Palladium	Other[2] Metals	Total
1969			175.4	248.3	112.6	445.3	22.3	54.1	36.2	32.3	58.6	5.0	519.4	758.7	83.0	1,361.2
1970			148.3	231.4	103.3	442.9	18.3	49.2	29.2	27.5	202.0	15.7	509.0	739.3	82.8	1,331.2
1971			135.1	253.8	51.9	447.6	23.1	63.1	18.6	30.6	141.8	3.5	426.7	760.1	74.5	1,261.3
1972			225.9	363.5	92.4	443.5	30.5	95.5	20.7	29.3	98.8	31.4	545.3	876.0	140.9	1,562.2
1973			239.0	334.1	117.4	551.1	27.9	136.3	22.4	38.9	123.6	20.3	658.5	1,012.5	160.9	1,833.9
1974	350.0	15.0	350.0	150.0	98.6	452.6	25.5	125.7	23.0	35.3	139.5	26.7	943.7	886.1	151.2	1,981.0
1975	273.0	97.0	148.8	166.9	73.6	153.1	17.1	115.9	22.9	29.5	108.0	5.4	698.6	541.5	68.6	1,308.7
1976	481.0	194.9	83.6	154.7	89.3	197.5	26.9	140.4	23.4	14.8	59.1	7.7	851.1	657.1	94.9	1,603.1
1977	354.3	125.9	84.4	196.6	90.2	254.5	27.1	113.9	34.7	22.1	74.8	13.6	789.8	700.5	102.0	1,592.3
1978	597.5	201.8	149.7	186.5	106.4	346.5	44.1	208.0	25.8	25.1	108.4	19.2	1,196.3	917.9	145.4	2,259.6
1979	803.2	248.3	98.6	264.9	115.8	457.4	27.1	244.9	27.7	21.6	170.0	27.9	1,403.9	1,132.6	214.5	2,756.0
1980[1]	517.1	214.2	119.0	165.6	150.1	376.1	25.8	245.4	51.0	22.6	144.0	26.7	1,118.2	912.0	175.7	2,205.9
1981[3]													848.2	814.7	148.3	1,811.2
1982																

[1] Preliminary. [2] Palladium, iridium, osmium, rhodium, & ruthenium. [3] Estimate. *Source: Bureau of Mines*



Salient Statistics of Platinum and Allied Metals in the U.S. In Troy Ounces

Year	Net Import Reliance as a % of Apparent Consumption	Production Crude[5]	Refinery New Metal	Refinery Secondary Metal	Stocks as of Dec. 31[1] Platinum	Stocks as of Dec. 31[1] Palladium	Stocks as of Dec. 31[1] Other	Stocks as of Dec. 31[1] Total	Imports for Consumption	Value of Imports Mil. $	Exports Platinum	Exports Other Groups[3]	Exports Other[6]
1969		21,586	17,875	371,659	361,305	608,716	98,087	1,068,108	1,225,851	93.9	223,569	277,495	
1970		17,316	19,822	350,176	291,544	332,726	85,754	710,024	1,410,786	104.8	270,584	143,182	
1971		18,029	21,184	278,175	385,828	316,126	94,837	796,791	1,388,043	93.7	320,342	83,768	
1972		17,112	15,380	255,641	426,611	405,793	98,449	930,853	1,892,184	144.1	417,037	121,949	
1973		19,980	19,916	265,901	446,522	493,078	93,524	1,033,124	2,504,181	248.8	439,452	188,074	
1974		12,657	13,234	325,216	532,675	478,210	110,921	1,121,806	3,251,311	504.6	474,494	361,260	
1975	83	18,920	16,571	270,101	420,770	335,621	92,819	849,210	1,820,284	272.8	284,796	283,435	91,654
1976	90	6,116	7,101	215,355	536,318	459,765	89,620	1,085,703	2,667,059	291.5	138,951	186,602	186,854
1977	91	5,545	5,199	195,219	438,045	475,358	99,409	1,012,812	2,510,374	273.0	149,023	137,324	140,284
1978	90	8,246	8,303	257,191	369,823	369,937	121,651	861,411	2,921,411	450.2	166,095	356,990	179,462
1979	89	7,300	8,392	309,022	305,6$5	323,865	131,812	761,282	3,479,128	840.5	207,832	522,195	189,218
1980[2]	88	3,348	2,300	330,923	502,185	353,002	118,074	973,261	3,501,782	1,177	289,454	302,457	173,053
1981[4]	85	6,000	—407,316—		435,515	401,169	114,267	950,951	2,849,617	800.3	391,194	258,745	212,426
1982													

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[1] In hands of refiners, importers, & dealers. [2] Preliminary. [3] Palladium, rhodium, iridium, osmium ruthenium, & osmium metals & alloys. [4] Estimate. [5] From crude platinum placers & byproduct platinum-group metals. [6] Ore & concentrates; waste, scrap & sweepings. *Source: Bureau of Mines*

High, Low & Closing Prices of April Platinum Futures in New York In Dollars per Ounce

Year of Delivery		Year Prior to Delivery											Delivery Year				Life of Delivery Range
		Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	
1978	High	178.4	180.3	175.0	169.7	163.2	160.3	158.3	160.8	176.3	179.2	190.0	224.8	239.5	247.2	226.0	247.2
	Low	171.0	169.0	166.2	159.6	152.5	154.5	148.5	152.8	156.4	162.3	174.3	186.6	211.6	212.0	208.9	148.5
	Low	177.5	174.3	168.0	162.7	159.4	156.4	153.4	159.0	174.4	176.5	189.2	219.0	230.3	225.8	210.0	—
	Close	255.0	263.0	241.5	263.5	261.3	277.4	284.3	292.5	390.0	371.6	358.0	393.0	430.5	413.2	398.0	430.5
1979	High	229.0	228.3	212.8	217.9	238.0	244.5	260.0	261.5	288.0	302.0	325.0	342.5	378.1	365.0	371.0	173.6
	Close	246.3	241.8	219.8	258.6	247.6	277.4	264.2	289.9	381.6	324.2	354.6	384.7	414.6	385.0	397.0	—
1980	High	438.0	421.5	409.5	458.3	446.0	429.0	434.0	573.6	608.6	550.0	715.3	974.4	960.0	1,045.0	642.0	1,045.0
	Low	388.5	370.0	369.0	402.0	410.0	382.0	368.0	417.0	468.5	467.0	537.0	715.0	827.0	465.0	525.0	270.1
	Close	423.2	390.1	409.5	451.0	426.9	388.8	428.0	573.6	485.5	546.0	692.6	832.0	920.1	560.0	602.0	—
1981	High	1,100.0	1,190.0	738.0	624.8	753.5	785.0	720.0	810.0	755.0	714.0	680.5	621.0	518.0	546.0	523.0	1,190.0
	Low	972.0	623.5	623.5	563.8	646.0	653.7	660.0	710.0	673.0	622.0	561.0	452.2	455.0	430.0	443.5	430.0
	Close	1,070.0	663.5	626.0	624.8	740.7	676.0	707.2	742.8	681.8	673.4	606.0	463.5	461.7	500.3	461.0	—
1982	High	595.0	624.7	594.5	551.0	533.0	460.6	488.5	494.0	462.5	434.5	434.0	392.5	380.0	346.5	364.0	624.7
	Low	535.7	507.0	507.0	502.0	447.0	425.5	418.7	407.0	424.0	381.0	376.0	352.5	342.0	296.5	311.5	296.5
	Close	540.2	577.1	529.9	528.0	455.5	438.7	460.7	435.4	429.8	405.0	384.1	368.2	344.3	318.3	332.2	—
1983	High	429.6	390.0														
	Low	388.0	342.6														
	Close	395.0	357.2														

Source: N.Y. Mercantile Exchange

Month End Open Interest of Platinum Futures in New York In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1979	7,408	8,703	6,856	6,941	10,289	7,748	8,120	8,278	8,466	8,373	8,816	9,230
1979	8,755	9,866	9,302	9,088	8,861	9,683	10,865	9,850	8,563	7,525	7,595	8,926
1980	8,200	8,409	6,209	5,434	6,369	7,943	7,797	8,286	14,239	12,140	12,026	11,911
1981	9,410	8,946	9,441	7,709	8,130	7,891	5,520	6,446	8,421	7,055	8,601	7,839
1982	6,278	7,524	8,686	8,302								
1983												

Source: N.Y. Mercantile Exchange

Volume of Trading of Platinum Futures in New York In Thousands of Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	28.3	35.9	48.9	27.2	38.5	33.9	26.0	34.5	28.1	39.0	33.1	32.5	405.7
1979	43.8	45.4	43.4	42.1	45.2	50.8	47.6	56.0	48.4	35.0	38.2	40.1	536.1
1980	35.2	28.5	41.7	21.4	26.6	37.6	40.8	26.7	59.7	41.0	34.8	35.9	429.7
1981	36.5	29.7	56.1	36.7	30.8	44.7	37.9	39.1	63.9	35.4	33.2	46.6	490.5
1982	32.5	29.5	48.4	42.4									
1983													

Source: N.Y. Mercantile Exchange

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Pork Bellies

Domestic consumption of bacon (the end product after pork bellies have been cured and sliced), as measured by federally inspected bacon slicings, decreased 3.1 percent in 1981. According to USDA statistics, total bacon slicings for the year were 1,623 million pounds, compared with 1,675 million in 1980.

U.S. cold storage stocks of frozen pork bellies on December 31, 1982 totaled 54.5 million pounds, 44 percent below the previous year's 97.4 million pounds. The retail price of bacon, which averaged $1.67 per pound in January, 1981, dropped to $1.53 by April and then rose to $1.78 per pound by October. Retail prices eased to $1.75 per pound by December 1981 compared with $1.71 the previous year.

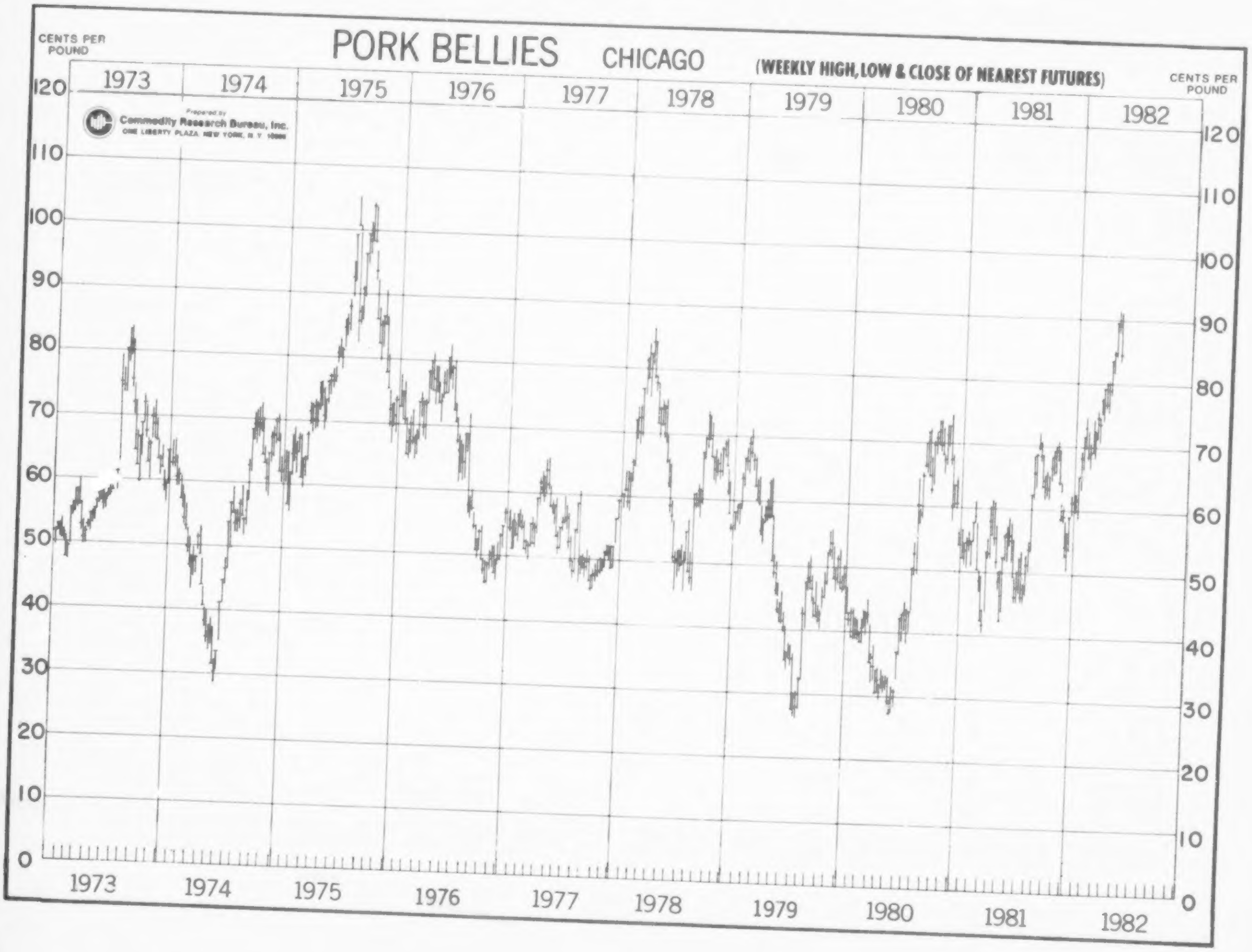
The December 1, 1981 U.S. market hog inventory was 9 percent below the year-earlier level, and 1981 pork production of 15.7 billion pounds was 4 percent less than 1980 production. U.S. cold storage holdings of pork bellies on March 31, 1982 were 37 percent below the previous year.

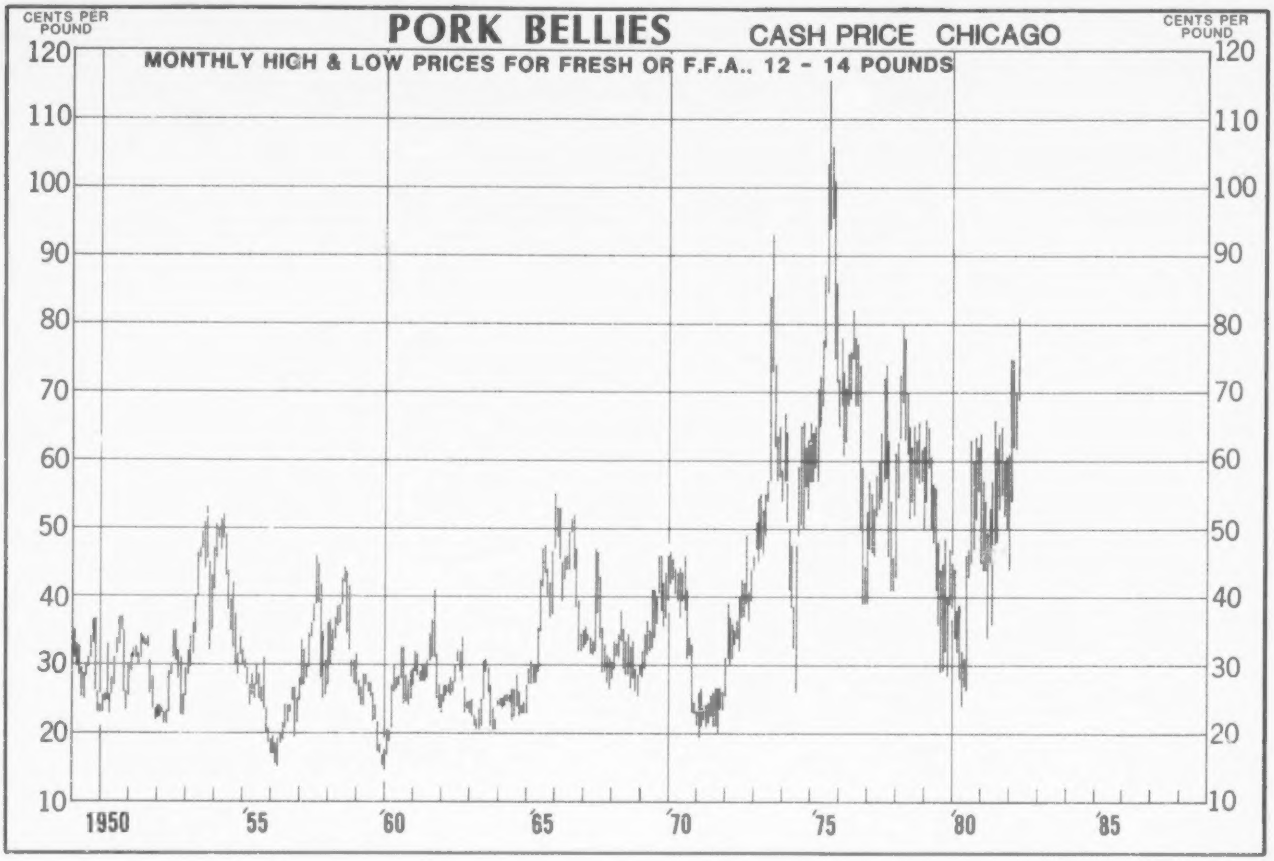
The USDA March Hogs & Pigs Report for the 14 states conducting quarterly hog surveys (which account for about 85 percent of the U.S. hog and pig inventory) showed that the inventory of hogs and pigs on farms March 1, 1982 was 10 percent smaller than the March 1, 1981 inventory. In addition, March–May 1982 farrowing intentions for the 14 states were 14 percent below farrowings in the comparable period of 1981. Thus the outlook for hog slaughter (and pork belly production) in the second half of 1982 was for continued reductions from year-earlier levels.

Demand for bacon, and in turn for pork bellies, is considered to be fairly uniform. This is partly because it is used in small quantities with other foods, and its price tends to be less a factor in eating habits than the price of these other foods. Bacon has less nutritive value for its cost than most other foods and is seldom eaten by itself. Two major uses of bacon are as a breakfast food with eggs, and as a warm weather lunch in bacon, lettuce, and tomato sandwiches. Nevertheless, the consumption of bacon is influenced to some extent by any significant shifts in real spendable earnings.

Futures Market

Pork belly futures are traded on the Chicago Mercantile Exchange.





U.S. Frozen Pork Belly Storage Stocks (In Thousand Pounds, as of First of the Month)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1969	49,076	46,699	56,173	76,035	96,249	96,670	84,284	46,755	21,719	12,167	19,565	26,074
1970	38,697	37,017	47,094	61,068	74,004	82,061	67,250	39,300	20,393	9,823	21,043	42,054
1971	76,437	81,561	83,004	111,579	131,262	146,093	140,778	105,015	70,504	50,654	53,057	68,004
1972	86,065	84,092	88,090	107,013	131,189	133,069	105,727	69,933	35,792	16,691	22,175	34,167
1973	39,278	32,388	30,764	46,406	50,205	54,980	48,817	26,270	10,186	9,140	15,397	31,580
1974	48,758	48,499	53,083	65,237	78,707	87,290	70,470	39,621	21,762	12,850	22,274	38,441
1975	49,514	40,374	42,846	51,771	65,645	65,470	53,389	22,995	10,057	7,418	17,645	33,532
1976	44,722	37,386	38,526	51,176	60,144	63,799	49,258	25,773	8,689	5,858	9,708	24,946
1977	42,906	38,338	36,364	52,806	69,539	80,658	62,695	29,901	9,640	5,241	4,230	20,642
1978	23,747	19,013	15,738	39,631	70,976	82,343	75,027	44,787	21,015	7,482	20,013	40,964
1979	54,367	39,432	37,172	57,744	69,689	86,065	78,935	53,373	21,800	11,077	17,739	42,156
1980	70,201	69,635	67,800	85,444	98,163	106,869	96,967	68,616	34,410	21,867	42,186	72,127
1981[1]	97,365	90,181	94,661	104,357	125,469	132,568	117,795	72,998	36,094	16,228	18,060	35,058
1982[1]	54,639	46,167	41,855	65,486								
1983												

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

Weekly Federally Inspected Hog Slaughter

Week Ending	(In Thousand Head)				
	1982[1]	1981	1980	1979	1978
Jan. 2	1,428	1,297	1,378		
9	1,881	1,957	1,972	1,179	1,247
16	1,656	1,885	1,762	1,625	1,473
23	1,643	1,793	1,785	1,389	1,376
30	1,623	1,816	1,777	1,345	1,261
Feb. 6	1,552	1,773	1,770	1,383	1,527
13	1,650	1,731	1,760	1,381	1,437
20	1,484	1,672	1,642	1,488	1,551
27	1,652	1,698	1,765	1,367	1,348
Mar. 6	1,698	1,757	1,806	1,533	1,424
13	1,676	1,823	1,898	1,592	1,579
20	1,663	1,826	1,885	1,663	1,508
27	1,705	1,840	1,858	1,607	1,422
Apr. 3	1,609	1,848	1,858	1,646	1,452
10	1,606	1,914	1,736	1,644	1,508
17	1,608	1,823	1,919	1,669	1,608
24	1,656	1,727	2,028	1,609	1,504
May 1		1,771	2,028	1,710	1,588
8		1,763	1,918	1,759	1,498
15		1,771	1,973	1,677	1,522
22		1,694	1,916	1,598	1,377
29		1,422	1,891	1,592	1,329
June 5		1,561	1,582	1,390	1,138
12		1,618	1,851	1,647	1,377
19		1,500	1,747	1,631	1,283
26		1,434	1,683	1,398	1,297
July 3		1,324	1,669	1,600	1,266
10		1,401	1,269	1,269	1,054
17		1,444	1,573	1,630	1,378
24		1,442	1,600	1,590	1,376
31		1,496	1,530	1,595	1,318
Aug. 7		1,539	1,574	1,638	1,337
14		1,554	1,553	1,662	1,367
21		1,576	1,611	1,692	1,329
28		1,591	1,612	1,664	1,349
Sept. 4		1,658	1,497	1,509	1,251
11		1,456	1,867	1,776	1,579
18		1,785	1,812	1,764	1,581
25		1,699	1,707	1,772	1,497
Oct. 2		1,742	1,759	1,870	1,479
9		1,769	1,791	1,950	1,533
16		1,817	1,864	1,929	1,475
23		1,786	1,861	1,909	1,478
30		1,814	1,955	2,016	1,549
Nov. 6		1,789	1,810	1,790	1,651
13		1,841	2,022	1,548	1,328
20		1,511	1,514	1,981	1,642
27		1,947	1,952	1,940	1,613
Dec. 4		1,884	1,841	1,861	1,497
11		1,884	1,841	1,861	1,497
18		1,864	1,816	1,746	1,489
25		1,223	1,191	1,277	1,149

Weekly Pork Belly Storage Movement

& Stocks[1] in Thousands of Pounds									
1982[1] Week Ending	In	Out	On Hand	Net Movement	1981 Week Ending	In	Out	On Hand	Net Movement
Jan. 2	1,066	606	47,064	+ 460	Jan. 3	1,769	571	82,206	+1,198
9	575	1,449	46,190	− 874	10	1,466	1,870	81,802	− 404
16	1,374	1,260	46,304	+ 114	17	2,227	2,263	82,766	+ 474
23	527	1,457	46,480	− 930	24	1,192	3,512	79,446	−2,320
30	574	5,137	41,917	−4,563	31	1,092	4,404	76,134	−3,312
Feb. 6	223	4,901	37,239	−4,678	Feb. 7	566	2,183	74,517	−1,617
13	523	2,282	35,480	−1,759	14	1,009	1,106	74,799	− 97
20	499	1,226	34,753	− 727	21	2,536	819	76,516	+1,717
27	1,435	701	35,487	+ 734	28	3,756	829	79,443	+2,927
Mar. 6	4,754	517	39,724	+4,237	Mar. 7	3,201	235	82,409	+2,966
13	6,343	76	45,991	+6,267	14	3,047	235	85,221	+2,812
20	4,509	—	50,500	+4,509	21	2,973	383	87,811	+2,590
27	4,886	289	55,097	+4,597	28	2,465	565	89,711	+1,900
Apr. 3	3,907	314	58,690	+3,593	Apr. 4	1,548	676	90,583	+ 872
10	3,444	136	61,998	+3,308	11	4,335	391	94,527	+3,944
17	1,856	255	63,599	+1,601	18	5,779	298	100,008	+5,481
24	1,158	490	64,267	+ 668	25	5,759	466	105,301	+5,294
May 1	717	560	64,424	+ 157	May 2	5,722	475	110,548	+5,247
8					9	6,131	237	116,442	+5,894
15					16	4,734	274	120,992	+4,460
22					23	2,010	752	122,160	+1,258
29					30	500	3,146	119,514	—2,646
June 5					June 6	910	2,445	117,969	−1,545
12					13	160	3,377	114,752	−3,217
19					20	391	4,459	110,684	−4,060
26					27	619	4,916	106,387	−4,297
July 3					July 4	128	4,840	101,675	−4,712
10					11	125	7,940	93,860	−7,815
17					18	417	8,503	85,774	−8,086
24					25	102	11,839	74,037	−11,737
31					Aug. 1	159	10,521	63,675	−10,362
Aug. 7					8	824	9,026	54,973	−8,702
14					15	113	8,043	47,043	−7,930
21					22	114	8,251	38,906	−8,137
28					29	385	8,938	30,353	−8,553
Sept. 4					Sept. 5	679	4,977	26,055	−4,298
11					12	155	4,527	21,683	−4,372
18					19	228	3,822	18,089	−3,594
25					26	257	3,810	14,536	−3,553
Oct. 2					Oct. 3	258	2,261	12,533	−2,003
9					10	396	1,883	11,046	−1,487
16					17	974	948	11,072	+ 26
23					24	2,097	483	12,686	+1,615
30					31	1,385	267	13,804	+1,118
Nov. 6					Nov. 7	2,286	172	15,918	+2,114
13					14	2,881	514	18,285	+2,367
20					21	6,065	362	23,988	+5,703
27					28	4,598	185	28,401	+4,413
Dec. 4					Dec. 5	6,625	322	34,704	+6,303
11					12	5,632	46	40,290	+5,586
18					19	4,644	37	44,897	+4,607
25					26	1,707	—	46,604	+1,707

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[1] Total approved Chi. Merc. Exch. warehouses. [2] Preliminary. *Sources: U.S. Department of Agriculture; Chicago Mercantile Exchange*

PORK BELLIES

High, Low & Closing Prices of May Pork Bellies Futures at Chicago In Cents per Pound

Year of Delivery		Year Prior to Delivery										Delivery Year					Life of Delivery Range
		Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	
1978	High	56.35	60.50	59.85	53.80	54.80	49.50	49.40	48.20	52.20	57.25	62.35	74.35	86.25	84.15	75.40	86.25
	Low	53.15	54.35	52.60	46.50	46.05	43.85	44.45	44.25	46.90	48.15	56.00	62.15	71.55	69.47	67.90	43.85
	Close	55.60	56.20	53.75	52.70	46.60	47.10	44.50	46.65	50.50	57.22	61.85	71.55	84.15	73.90	69.50	—
1979	High	72.50	69.30	68.75	65.20	60.00	62.70	68.00	72.02	68.40	68.70	63.70	70.95	67.30	63.60	63.50	72.50
	Low	63.10	65.00	62.25	50.30	51.65	54.70	56.10	62.80	62.60	55.00	55.80	62.50	54.60	50.85	47.95	47.95
	Close	69.50	65.00	64.25	53.50	60.00	57.47	67.70	65.27	66.70	56.27	63.45	65.25	55.35	63.27	49.35	—
1980	High	—	56.10	55.60	51.05	49.20	49.30	52.42	50.25	57.85	54.60	53.47	44.85	46.70	38.00	34.30	57.85
	Low	—	50.25	47.90	43.10	39.35	39.10	43.40	41.65	47.60	47.92	41.55	39.65	34.77	29.45	30.40	29.45
	Close	—	56.10	47.90	43.65	41.00	48.60	45.60	48.70	50.27	49.50	43.05	42.50	36.30	30.27	31.60	—
1981	High	58.50	52.60	49.75	54.50	61.60	66.25	73.30	75.15	75.15	77.05	59.60	63.00	55.30	61.35	52.65	77.05
	Low	49.75	46.15	43.35	41.32	53.50	57.40	59.25	63.47	67.70	58.05	53.65	52.55	41.90	52.15	42.45	41.32
	Close	51.10	48.40	43.45	53.90	59.30	59.50	68.47	71.20	75.15	58.05	57.70	52.55	55.05	52.15	48.77	—
1982	High	69.15	75.50	72.70	75.90	69.40	72.10	72.50	70.22	71.40	63.75	73.55	75.80	77.85	85.10		
	Low	54.50	70.15	63.00	64.10	61.75	64.12	62.70	62.95	59.25	51.90	61.12	67.55	69.00	74.75		
	Close	69.15	70.15	72.70	64.10	65.15	64.95	65.15	68.85	61.05	62.70	73.55	70.37	75.15	84.92		
1983	High	73.85	77.95														
	Low	70.20	71.65														
	Close	72.60	77.55														

Source: Chicago Mercantile Exchange

Month End Open Interest of Pork Bellies Futures at Chicago In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	10,544	10,029	9,756	10,898	11,500	10,407	8,780	7,557	8,221	9,780	11,956	13,087
1979	10,597	10,592	9,337	10,586	14,069	23,174	25,400	22,840	22,062	21,805	25,585	27,981
1980	29,631	28,195	18,212	22,939	28,404	26,944	20,025	14,983	18,242	23,098	26,231	22,480
1981	15,687	12,471	12,821	16,714	15,825	18,911	11,550	10,058	10,424	14,088	16,425	13,643
1982	21,542	21,666	21,048	28,063								
1983												

Source: Chicago Mercantile Exchange

Volume of Trading of Pork Bellies Futures at Chicago In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	137,389	132,101	150,884	134,178	166,433	126,865	113,817	92,169	83,650	109,911	100,223	92,022	1,439,651
1979	114,980	99,552	106,840	99,408	117,262	154,721	162,816	151,865	118,087	120,649	139,703	121,509	1,514,176
1980	191,920	206,539	189,881	183,876	165,844	206,669	198,256	169,404	167,355	220,435	178,821	176,622	2,250,945
1981	176,243	154,438	135,527	179,503	157,342	199,013	187,785	131,619	139,272	171,480	194,561	170,944	1,997,697
1982	196,040	216,333	263,431	265,863									
1983													

Source: Chicago Mercantile Exchange

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Potatoes

The USDA estimated the 1981 U.S. fall potato crop at 291 million cwt., a 9-percent rise over the 1980 crop, but still 2 percent less than in 1979. Acres harvested totaled 1.05 million, 7 percent more than in 1980. The U.S. average fall crop yield was 278 cwt. an acre, 6 cwt. more than in 1980. The highest yields were recorded in Washington State (485 cwt.), which was a decline of 20 cwt. from 1980. Rains late in the season caused some loss of acreage and reduced yields in the Eastern states. Adverse weather affected the crop in the Western states, while freezing temperatures and excessive rains caused crop losses in the Red River Valley and Michigan.

Production in the seven Eastern states increased by 9 percent in 1981, from 1980. Fall output was estimated at 46.2 million cwt. A total of 178,000 acres were harvested, a decrease of 1 percent from 1980. The average yield was estimated at 260 cwt. an acre, an increase of 24 cwt. over 1980, reflecting the return to normal precipitation levels in some leading production areas.

Fall 1981 potato production in the nine Western states was estimated at 180 million cwt., up 6 percent from 170 cwt. in 1980. The total area harvested was 576,000 acres, an 11-percent increase over 1980. Average yield per acre in 1981 was 313 cwt.—considerably less than 1980's 327 cwt.

The eight Central states fall 1981 crop was estimated at 64.1 million cwt., 17 percent above the previous year's drought-stricken crop. In 1981, 293,800 acres were harvested compared with 283,700 in 1980. The average yield in 1981 was 218 cwt an acre, vs. 193 cwt. in 1980.

Summer potato production in 1981 was revised to 20.0 million cwt., 18 percent above the record low output of 1980. Estimated area harvested totaled 95,000 acres, up 5 percent from 1980. Average yield equaled the record high of 211 cwt. per acre set in 1979 and was 22 cwt. above 1980.

Producer prices for potatoes were 14 percent less during the final quarter of 1981 than in 1980. During December, the tablestock demand for potatoes in many of the major producing areas was on the light side. But, processing demand for the 1981 crop was very strong. As of January 1, 1982, 49 million cwt. were used for freezing and dehydration, 7.7 million more than a year earlier. Light demand and increased supply help explain the lower producer prices in 1981. The farm price was $4.48 per cwt. for fourth-quarter 1981, compared with $5.36 in 1980. The price received by growers in January 1982 was $4.6 per cwt., down from $7.38 in January 1981.

The estimated amount of potatoes used for processing was up sharply over the previous year's total. Frozen potato stocks on January 1, 1982, totaled 687 million pounds vs. 730 million the previous year. Of the total frozen stocks, 577 million pounds were french fries vs. 627 million a year earlier. In 1980/81, exports of dehydrated potatoes for consumption were down 21 percent from a year earlier, to 8.9 million pounds (processed weight). Exports of potato flakes also declined, to 65 million pounds vs. 106 million pounds in 1979/80.

Potato stocks as of April 1, 1982 in 15 major fall producing states were estimated at 77.5 million cwt., 7 percent above a year ago. Estimated holdings in the three Eastern states totaled 10.4 million cwt., 8 percent greater than the previous year. Stocks in Maine, at 8.60 million cwt., were up 5 percent from a year ago. In the six Central states, stocks were estimated at 13.0 million cwt., 64 percent above the previous year. North Dakota's stocks were 92 percent greater than a year ago, while Minnesota and Wisconsin were up 70 and 36 percent, respectively. Holdings in the six Western states were estimated at 54.1 million cwt., 2 percent below April 1, 1981. Idaho's stocks were estimated at 30.0 million cwt., down 9 percent from a year earlier. Holdings in Washington were up 15 percent while Oregon was unchanged, compared with April 1, 1981.

Disappearance to April 1, 1982 in the 15 major fall producing states totaled 204 million cwt., 11 percent above the same period a year ago. This included 23.5 million cwt. of potatoes dumped during grading, fed to livestock, discarded without grading and lost to shrinkage (moisture loss). Disappearance for the

Salient Statistics of Potatoes in the United States

Year	Acreage		Yield Per Harv. Acre Cwt.	Farm Disposition				Farm Price $ Cwt.	Value of		Stocks on Jan. 1[4] 1,000 Cwt.	Foreign Trade[5]		Consump. Per Capita[7] in Lbs.
				Used Where Grown			Sold [3]							
	Planted	Harvested		Seed & Feed	Shrinkage & Loss	Household Use			Prod.[6]	Sales		Dom. Exports	Imports	
	1,000 Acres			Million Cwt.					Million $			1,000 Cwt.		
1971	1,432	1,391	230	8.9	27.9	[2]	282.5	1.90	603		147,550	3,241	1,098	118.7
1972	1,301	1,256	236	7.9	20.0	[2]	268.5	3.02	896	808	148,600	4,430	759	119.4
1973	1,330	1,307	230	6.5	18.4	[2]	275.1	4.90	1,472	1,343	132,050	4,975	1,874	116.8
1974	1,422	1,392	246	6.5	32.5	[2]	303.4	4.01	1,355	1,215	131,600	4,545	1,453	114.3
1975	1,304	1,260	256	6.6	22.2	[2]	293.2	4.48	1,443	1,305	160,100	9,317	691	122.1
1976	1,407	1,371	261	6.8	26.2	[2]	324.7	3.59	1,283	1,167	156,220	11,617	806	116.1
1977	1,398	1,360	261	6.7	31.1	[2]	317.5	3.55	1,255	1,126	172,230	3,630	955	121.7
1978	1,401	1,375	267	6.3	34.4	[2]	325.6	3.38	1,224	1,097	175,300	3,025	703	122.0
1979	1,310	1,270	270	5.9	30.2	[2]	306.4	3.43	1,172	1,052	193,520	2.336	1,143	121.0
1980[1]	1,182	1,154	262	6.4	23.4	[2]	273.1	6.55	1,979	1,788	176,020			116.0
1981[1]	1,258	1,232	271								146,610			
1982[1]											160,010			

Note: 60 pounds equals one bushel. [1] Preliminary. [2] Included in "seed." [3] For all purposes, including food, seed processing livestock feed. [4] Merchantable stocks held by growers & local dealers. [5] Year beginning July. [6] Farm weight basis. Excludes canned & frozen potatoes. [7] Fresh & processed. *Source: Economic Research Service, U.S.D.A.*

month of March 1982 totaled 29.3 million cwt., compared with 24.8 million cwt. the previous year.

Potatoes processed to April 1, 1982 in the seven major processing states totaled 82.8 million cwt., 16 percent more than the same period a year earlier. During March 1982, 12.5 million cwt. were processed compared with 10.5 million cwt. in March 1981.

Spring 1982 potato production in the U.S. was forecast at 20.8 million cwt., virtually the same as in 1981 and 22 percent above the 1980 record low spring crop. Acreage intended for harvest totaled 77,200 acres, 1 percent less than in 1981 and the second smallest harvested acreage of record. Yield was expected to average a record high 269 cwt. per acre, 3 cwt. above the previous record high set in 1981.

Futures Markets

Round white potato futures are traded on the New York Mercantile Exchange. Russet futures are listed on the Chicago Mercantile Exchange.

World Production of Potatoes In Thousands of Metric Tons[2]

Yr. of Harvest	Austria	Canada	Czechoslovakia	France	E. Germany	W. Germany	Italy	Japan	Netherlands	Poland	Spain	United Kingdom	U.S.S.R.	United States	World Total
1974	1,996	2,501	4,522	7,473	13,404	14,549	2,849	2,942	6,095	48,519	5,693	6,791	81,022	15,531	249,673
1975	1,579	2,111	3,565	6,865	7,673	10,853	2,900	3,261	4,743	46,429	5,338	4,551	88,703	14,617	236,123
1976	1,746	2,345	4,214	4,326	6,816	9,808	2,937	3,742	4,783	49.951	5,659	4,789	85,102	16,224	240,144
1977	1,352	2,488	3,760	7,803	10,313	11,368	3,080	3,520	5,752	41,148	5,881	6,624	83,652	16,083	242,977
1978	1,401	2,496	3.863	7,467	10,100	10,510	2,801	3,316	6,231	46,648	5,316	7,330	86,100	16,615	250,568
1979	1,494	2,760	4,009	5,811	12,540	8,716	2,957	3,381	5,937	49,600	5,400	6,485	91,000	15,535	258,640
1980[1]	1,365	2,523	3,[illegible]	6,775	9,200	6,800	2,940	3,421	6,076	26,000	6,071	7,080	75,000	13,737	211,477
1981[2]		2,597		5,266		7,000	2,825	3,320	5,865			7,000		15,135	

[1] Preliminary. [2] Estimate. *Source: Foreign Agricultural Service, U.S.D.A.*

United States Potato Production by Seasonal Groups In Millions of Hundredweight (CWT.)

Year	Winter	Spring			Summer		Fall								Total U.S.
		Florida	Calif.	Total Spring	VA.	Total	Maine	Wisc.	Minn.	No. Dak.	Wash.	Idaho	Oregon	Total Fall	
1974	2.9	3.8	13.7	25.0	4.1	25.1	36.4	14.0	15.3	23.0	41.2	81.2	17.5	289.3	342.4
1975	2.9	3.5	10.5	20.0	2.4	21.0	26.8	14.9	9.7	17.6	48.3	78.5	24.4	278.4	322.0
1976	3.0	4.5	13.5	24.7	3.5	22.5	27.4	15.4	11.1	16.9	55.8	88.5	28.9	307.4	357.7
1977	2.7	4.6	11.9	22.9	3.5	22.0	28.3	18.0	13.0	21.6	50.6	88.2	25.6	307.1	355.3
1978	2.6	3.7	8.3	18.0	2.7	20.9	26.0	17.3	14.9	23.6	50.5	100.3	28.5	324.9	366.3
1979	2.4	4.4	11.1	21.3	2.6	21.8	27.7	17.0	12.9	18.2	48.5	85.1	25.3	296.9	342.5
1980	2.4	3.6	8.8	17.1	1.5	17.0	25.0	16.0	9.9	15.7	43.9	79.8	19.7	266.4	302.9
1981[1]	2.2	5.3	10.3	20.8	2.3	20.0	26.5	18.2	13.3	20.1	52.4	80.0	21.7	290.7	333.7
1982[1]	2.3	5.6	9.8	20.9											

[1] Preliminary, December estimate. *Source: U.S.D.A.—Crop Reporting Board*

Potato Crop Production Estimates, Stocks & Disappearance in the U.S. In Millions of Cwt.

Year	Crop Production Estimates						Total Storage Stocks[2]						Disappearance of Previous Fall Crop Until				
	Total Crop			Fall Crop				Following Year						Following Year			
	Oct. 1	Nov. 1	Dec.	Oct. 1	Nov. 1	Dec.	Dec. 1	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	Dec. 1	Jan. 1	Feb. 1	Mar. 1	Apr. 1
1974	337.8	339.0	340.1	286.6	287.9	287.7	183.9	160.1	131.5	103.0	75.2		97.8	122.6	152.2	181.4	200.6
1975	307.6	310.3	315.6				181.7	156.2	129.7	102.9	71.0		88.6	114.9	142.9	169.4	201.4
1976	349.9	349.3	353.4	299.8	299.2	302.8	198.6	172.2	142.0	112.8	81.1		99.1	128.3	157.8	188.0	218.4
1977	350.6	350.4	352.0	303.6	303.4	304.4	202.6	175.3	147.9	119.9	88.7		93.8	122.8	149.9	177.9	210.2
1978	353.6	357.7	360.5	312.0	316.0	318.7	219.9	193.5	163.0	132.6	99.3	64.8	94.6	122.0	153.0	185.0	218.0
1979	347.9	348.3	347.6	300.3	300.7	301.6	200.8	176.0	147.9	121.7	92.6	59.5	87.5	114.0	143.0	170.0	200.0
1980[1]	296.9	296.9	301.0	260.7	260.7	264.6	171.7	146.6	121.6	97.3	72.5	44.4	84.1	110.0	135.0	160.0	186.0
1981[1]	329.9	329.9	333.7	287.1	287.1	290.7	187.8	160.0	132.8	106.7			93.6	121.0	149.0	175.0	

[1] Preliminary. [2] Held by growers & local dealers in the fall producing areas. *Source: Crop Reporting Board, U.S.D.A.*

Volume of Trading in Maine Potato Futures, on N.Y. Mercantile Exchange In Contracts (50,000 Lbs. Per)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	55,269	44,671	45,075	53,844	12,859	18,487	19,670	41,255	36,754	48,503	38,099	38,643	453,129
1979	45,986	36,632	22,321	842	1,972	3,571	10,793	8,931	12,750	15,964	12,939	11,519	184,220
1980	13,849	12,656	14,443	9,650	5,853	20,483	47,611	52,794	60,988	62,081	48,084	45,267	293,759
1981	46,231	47,793	37,909	4,585	5,606	9,095	18,019	16,271	15,888	19,478	7,910	8,626	237,411
1982	10,058	13,180	8,198	2,868									

Source: New York Mercantile Exch.

Wholesale Price of Potatoes at New York In Dollars Per Cwt.

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
WHITE, WESTERN, NEW YORK[1]													
1974	11.500	14.000	15.000	16.000	20.000	13.250	12.000	11.000	10.625	11.000	10.750	10.250	12.948
1975	9.925	9.750	8.500	8.750	11.750	11.750	13.750	14.500	12.000	12.750	12.250	12.000	11.473
1976	11.850	12.250	12.250	12.750	12.500	12.000	10.875	9.500	N.A.	N.A.	10.000	10.250	11.423
1977	10.250	11.500	11.000	11.500	11.500	13.750	10.500	16.500	N.A.	11.000	12.250	11.000	11.886
1978	N.A.	N.A.	N.A.	N.A.	12.500	14.416	17.916	16.834	15.000	14.626	12.500	12.250	14.505
1979	12.750	17.376	16.250	11.750	12.000	13.084	7.500	6.313	6.250	6.875	6.875	9.063	10.507
1980	8.500	7.438	8.625	8.188	8.188	7.583	10.833	10.250	11.000	11.000	11.000	9.750	9.363
1981	12.375	11.875	11.000	11.000	10.250	11.000	11.417	11.750	11.000	10.000	9.750	11.500	11.076
1982	9.500	10.000											
WHITE, EASTERN, NEW YORK[2]													
1974	10.417	11.250	12.500	14.917	16.083	11.750	9.750	6.692	6.688	5.025	4.670	4.700	9.537
1975	4.333	5.875	5.125	5.333	7.438	7.750	13.417	8.000	8.538	8.000	7.000	6.325	7.261
1976	8.375	10.375	8.375	11.467	11.583	8.500	8.063	6.250	5.000	5.250	5.500	5.603	7.868
1977	7.125	9.917	9.383	12.375	13.375	11.313	7.875	5.250	5.200	5.500	5.550	5.175	8.170
1978	5.250	7.917	6.475	8.150	10.000	9.917	10.500	6.500	5.000	5.500	5.500	5.133	7.154
1979	5.867	5.967	8.083	9.413	9.000	8.125	7.333	5.750	5.333	5.625	5.617	5.250	6.780
1980	6.000	8.500	8.717	7.750	10.000	7.000	10.500	11.000	9.625	10.625	11.125	10.875	9.310
1981	13.000	13.625	18.083	20.125	16.875	17.000	12.125	8.250	10.833	7.750	8.125	8.125	12.826
1982	8.125	8.750											

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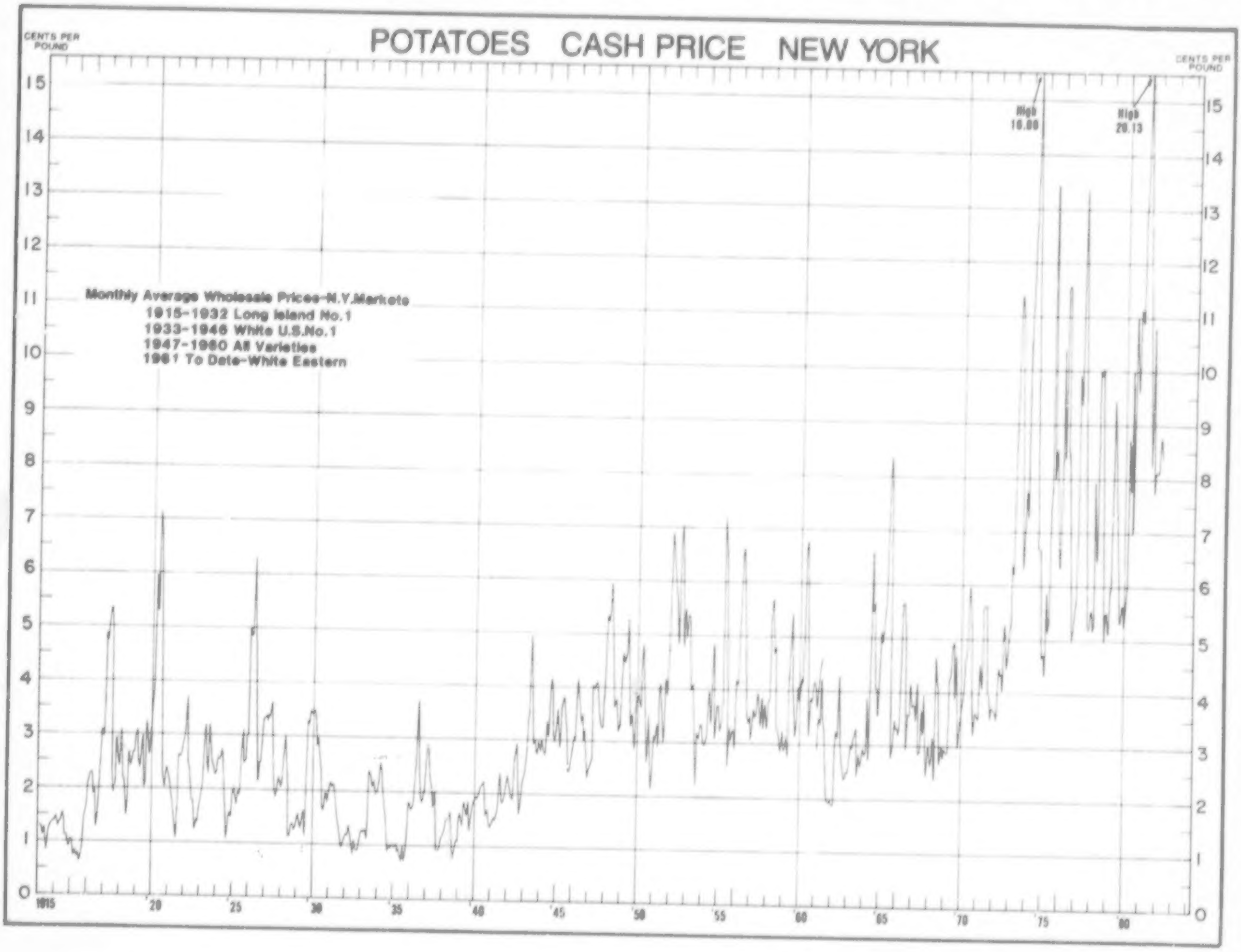
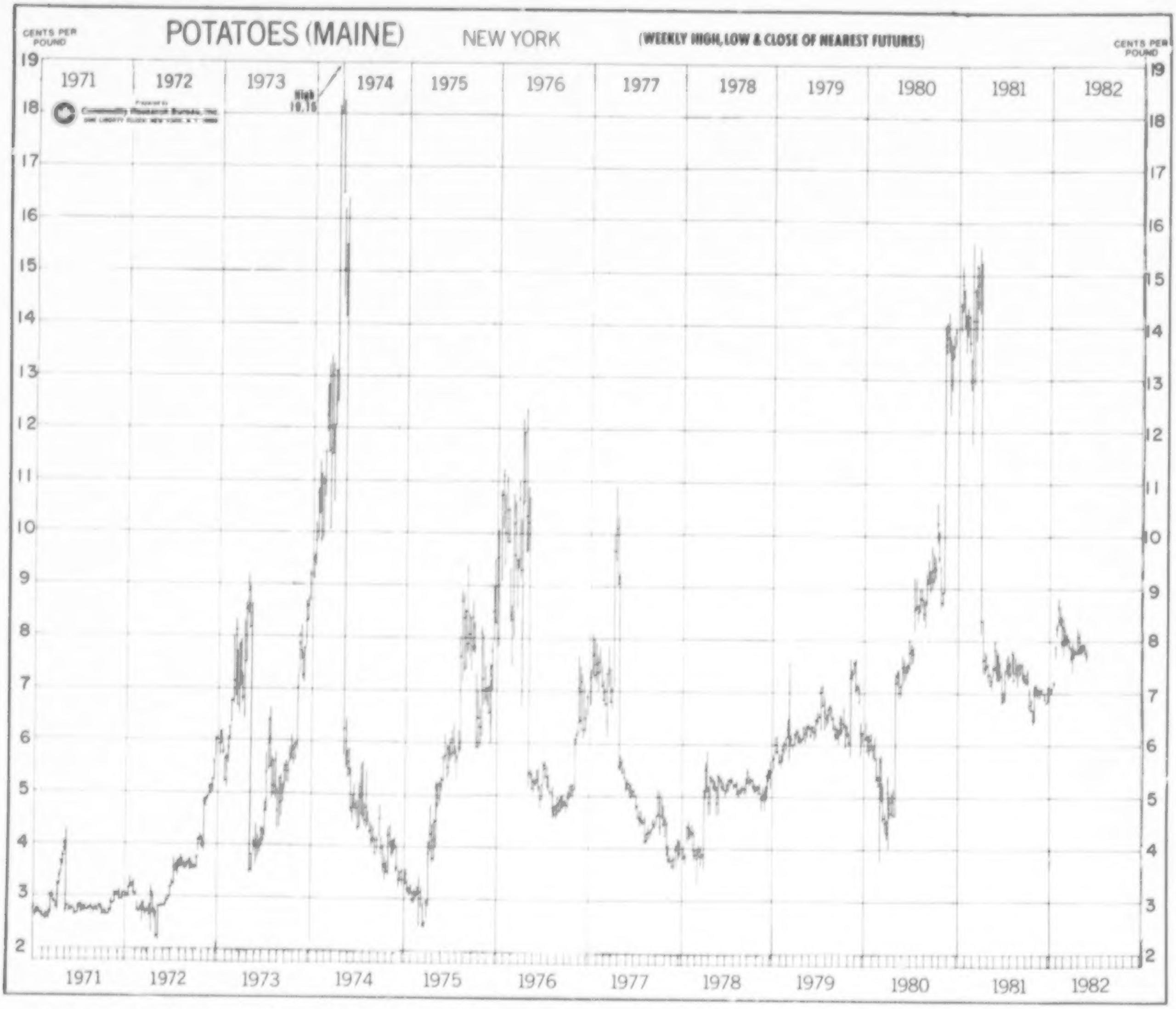
[1] All varieties and types of Irish old and new stock. U.S. No. 1A, Western origin, N.Y. Market (0113–0444.01). [2] Same. Eastern Origin. (0113-0443). *Source: Bureau of Labor Statistics*





High, Low & Closing Prices of April[1] Potato Futures at New York In Cents per Pound

Year of Delivery		Year Prior to Delivery											Delivery Year			Life of Delivery Range
		Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.[1]	
1979	High	6.70	7.03	7.19	6.90	6.64	6.45	6.90	6.65	6.32	5.88	5.92	6.45	6.50	7.60	7.60
	Low	6.55	6.60	6.52	6.26	6.34	5.95	6.04	6.12	5.17	5.14	5.30	5.83	5.94	6.30	5.14
	Close	6.60	7.03	6.75	6.47	6.40	6.20	6.59	6.23	5.75	5.64	5.85	6.04	6.45	7.60[2]	—
1980	High	—	—	—	—	—	11.74	11.00	10.74	10.76	9.33	8.24	7.05	6.40	5.80	11.74
	Low	—	—	—	—	—	9.70	10.30	8.65	8.70	8.10	6.80	6.01	5.36	4.01	4.01
	Close	—	—	—	—	—	10.40	10.75	9.72	9.08	8.19	6.85	6.07	5.36	4.05	—
1981	High	—	—	—	10.10	12.22	15.62	15.47	16.06	16.70	16.74	16.98	17.75	17.40	15.51	17.75
	Low	—	—	—	8.25	9.70	11.42	13.55	14.66	14.58	14.75	14.85	15.85	13.90	12.93	8.25
	Close	—	—	—	9.96	11.91	13.73	14.72	15.38	14.77	16.58	16.73	16.79	14.14	14.44	—
1982	High	—	11.87	11.49	10.25	10.22	10.86	10.99	10.80	10.50	8.77	8.77	8.99	9.39	8.25	11.87
	Low	—	11.05	9.70	9.40	8.85	8.93	10.02	9.96	8.14	8.17	7.72	7.75	8.22	7.40	7.40
	Close	—	11.14	9.85	10.21	9.04	10.50	10.20	10.11	8.37	8.48	7.85	8.64	8.27	7.80	—
1983	High	—	—	10.74												
	Low	—	—	9.71												
	Close	—	—	10.50												

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[1] Contract expires the last business day of the previous month. [2] Liquidated March 8, 1979. *Source: N.Y. Mercantile Exch.*

U.S. Cold Storage Stocks of All Frozen Potatoes—(First of Month) In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1973	677.3	666.2	734.5	755.3	746.6	671.6	509.9	316.7	246.7	311.8	427.7	496.8
1974	549.3	649.6	704.9	732.6	741.0	650.7	544.0	360.3	363.0	462.7	602.4	688.4
1975	693.5	723.0	797.8	814.4	906.7	945.1	881.1	661.1	536.1	548.9	651.6	689.1
1976	683.2	689.9	744.9	787.6	791.8	794.8	756.6	606.1	508.8	562.4	666.8	745.2
1977	750.4	777.2	809.1	870.8	893.3	903.0	886.5	720.5	576.4	611.0	726.7	805.0
1978	829.8	857.8	901.2	923.7	944.4	971.6	954.8	772.6	627.2	644.9	738.4	769.8
1979	777.5	778.7	784.5	818.2	849.3	930.4	971.7	866.0	671.3	647.1	761.0	814.3
1980	812.2	835.1	868.2	906.6	908.2	958.7	964.0	814.3	598.5	626.5	754.3	813.2
1981[1]	729.9	707.5	757.8	774.4	792.6	812.4	792.7	592.2	457.9	563.9	718.4	746.9
1982[1]	688.7	703.5	783.4	839.4								

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

U.S. Average Price Received by Farmers for Potatoes In Dollars Per CWT.

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Avg.[1]
1972	1.84	1.81	1.83	1.80	1.99	2.37	3.68	3.08	2.41	2.13	2.55	2.76	3.01
1973	3.16	3.30	3.82	4.11	4.79	6.15	7.45	4.76	3.24	2.68	3.64	3.95	4.89
1974	4.88	6.23	7.08	7.96	8.11	6.43	5.59	4.78	4.05	4.09	3.88	3.51	4.01
1975	3.36	3.15	2.79	3.23	3.56	5.33	6.58	5.06	4.04	3.63	3.84	3.92	4.48
1976	4.61	4.64	4.95	5.22	5.10	4.44	4.35	3.86	3.20	3.17	3.04	3.10	3.59
1977	3.44	3.52	3.59	3.94	4.42	4.57	5.27	4.01	3.29	3.11	3.08	3.10	3.55
1978	3.24	3.20	3.25	3.30	3.84	5.32	6.71	4.92	3.49	3.07	3.08	3.07	3.38
1979	3.09	2.77	2.94	2.82	3.08	3.00	3.41	3.61	3.23	3.14	3.35	3.51	3.43
1980	3.44	3.37	3.23	3.21	3.74	4.36	5.91	7.64	6.42	4.38	5.42	6.60	6.55
1981[2]	7.38	7.51	8.12	8.41	8.22	9.10	9.81	7.36	5.07	4.14	4.51	4.56	5.40
1982[2]	4.63	4.78	4.86	5.28									

[1] Annual weighted average by sales. [2] Preliminary. *Source: Statistical Reporting Service, U.S.D.A.*

Utilization of Potatoes in the United States In Millions of Cwt.

	Sales												
		For Processing							Other Sales				
Crop Year	Table Stock	Chips, Shoestrings	For dehydration	Frozen French Fries	Other Frozen Pdt's	Canned Potatoes	Other Canned Pdt's[2]	Starch & Flour	Livestock Feed	Seed	Total Sales	Used on Farms Where Grown	Total
1972	111.7	34.6	27.5	56.1	7.9	2.1	2.2	3.4	5.0	18.0	268.5	27.9	296.4
1973	107.6	34.5	31.4	60.3	9.6	2.7	2.5	2.7	3.7	20.1	275.1	25.0	300.0
1974	125.6	32.8	34.7	69.2	9.2	2.6	2.1	3.7	4.2	19.4	303.4	39.0	342.4
1975	114.4	34.1	33.8	70.6	9.5	1.9	2.1	2.2	4.3	20.7	293.5	28.8	322.3
1976	123.1	34.6	40.4	79.7	12.9	1.9	2.6	2.8	6.3	20.5	324.7	33.0	357.7
1977	116.6	36.9	32.8	79.9	14.6	2.8	2.5	2.4	7.4	21.0	316.8	37.8	354.6
1978	112.1	37.8	33.2	79.5	15.4	2.7	2.1	3.5	7.2	20.0	325.6[4]	40.7	366.3
1979	115.0	38.3	30.8	74.3	14.4	2.5	2.3	3.6	6.6	18.2	306.4	36.1	342.5
1980[1]	97.2	37.6	28.2	67.2	13.7	2.1	1.9	2.2	3.9	19.1	273.1	29.8	302.9
1981													

[1] Preliminary. [2] Hash, stews, soups. [3] Estimate. [4] Includes 12.0 sold for livestock feed & starch under the U.S.D.A. diversion program. *Source: Crop Reporting Board, U.S.D.A.*

Month End Open Interest of Potato Futures at New York In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	20,254	13,758	15,412	5,389	8,493	9,413	10,390	11,529	12,644	12,977	11,759	11,617
1979	12,083	13,789	863	1,030	1,655	2,336	3,786	4,516	4,323	4,898	5,307	3,993
1980	4,093	4,078	3,033	1,214	3,009	7,152	12,165	15,352	18,807	17,487	16,624	11,325
1981	11,722	7,489	1,106	2,214	2,956	4,142	[illegible]969	5,460	4,971	3,707	3,674	3,24[illegible]
1982	4,129	3,353	320	1,240								

Source: N.Y. Mercantile Exchange

Rapeseed

In early 1982, the Foreign Agricultural Service (FAS) of the USDA projected record 1981/82 world production of rapeseed at 12.0 million tonnes, approximately 5 percent above 1980/81 production and about 65 percent above the average output of the early 1970s. The increase in world production was primarily attributed to a 59-percent jump in Chinese rapeseed production for 1981/82. The estimate for China was 3.8 million tonnes, or 1.4 million tonnes more than in 1980/81. This Chinese production increase primarily resulted from a 1.0-million hectare increase in planted area. Timely rains also improved the outlook for India's rapeseed crop from prior expectations. India, the second largest producer of rapeseed in 1981/82, was expected to harvest 2.2 million tonnes, unchanged from the previous season.

Output in the other major producing countries in 1981/82 was estimated to be lower than in the previous season. Canadian production was estimated at 1.8 million tonnes, off nearly 700,000 tonnes because of a 23-percent cut in planted area. Despite a 19-percent increase in planted area, weather-related problems in Western Europe reduced the French 1981/82 production estimate to 1.0 million tonnes, a 6 percent drop from last year.

In cadence with the rise in 1981/82 rapeseed production, rapeseed oil and meal output was also estimated to increase slightly. India and China are the two largest producers of rapeseed oil. However, the record production in both countries was not expected to enter the world market since all of their oil is consumed domestically. Canada and the EEC are the major exporters of rapeseed oil.

Futures Market

Rapeseed futures are traded on the Winnipeg Commodity Exchange.

World Production of Rapeseed (In Thousands of Metric Tons)

Year[2]	Canada	China	Czechoslovakia	Denmark	France	E. Germany	W. Germany	India	Japan	Bangladesh	Pakistan	Poland	Sweden	Chile	World Total
1971	1,638	830.0	100.6	51.0	668.0	197.0	228.2	1,975	22.8	112.1	269.0	595.0	254.0	82.0	7,815
1972	2,155	1,000	107.0	51	722.0	234.0	248.7	1,433	15.9	106.0	301.0	430.0	327.0	77.9	6,624
1973	1,300	1,050	117.0	92	661.0	246.0	242	1,808	13.0	98	287.0	512.0	339	35.0	7,001
1974	1,207	1,075	85	112	690	280	301	1,692	9	107	293	523	351	33	7,022
1975[1]	1,163	1,090	115	115	532	250	194	2,300	7	110	305	726	327	55	7,989
1976[1]	1,749			90	561							980	279		
1977[3]	1,940	1,380		110	440			1,650			240	650	256		7,871
1978[3]	3,497	1,868	166	91	568	301	322	1,860	5	137	243	691	330	65	10,708
1979[3]	3,414	2,402	81	148	510	195	362	1,433	5	140	300	233	297	73	10,075
1980[3]	2,483	2,384	80	150	1,091	256	380	2,247	5	140	300	566	373	75	11,441
1981[3]	1,794	3,800			1,023			2,200				486			12,005

[1] Preliminary. [2] Harvest generally occurs in the first half of the calendar year given in all major producing countries except Canada. [3] Estimate. *Source: Foreign Agricultural Service, U.S.D.A.*

Wholesale Price of Rapeseed Oil, Refined (Denatured), in Tanks at N.Y. In Cents Per Pound

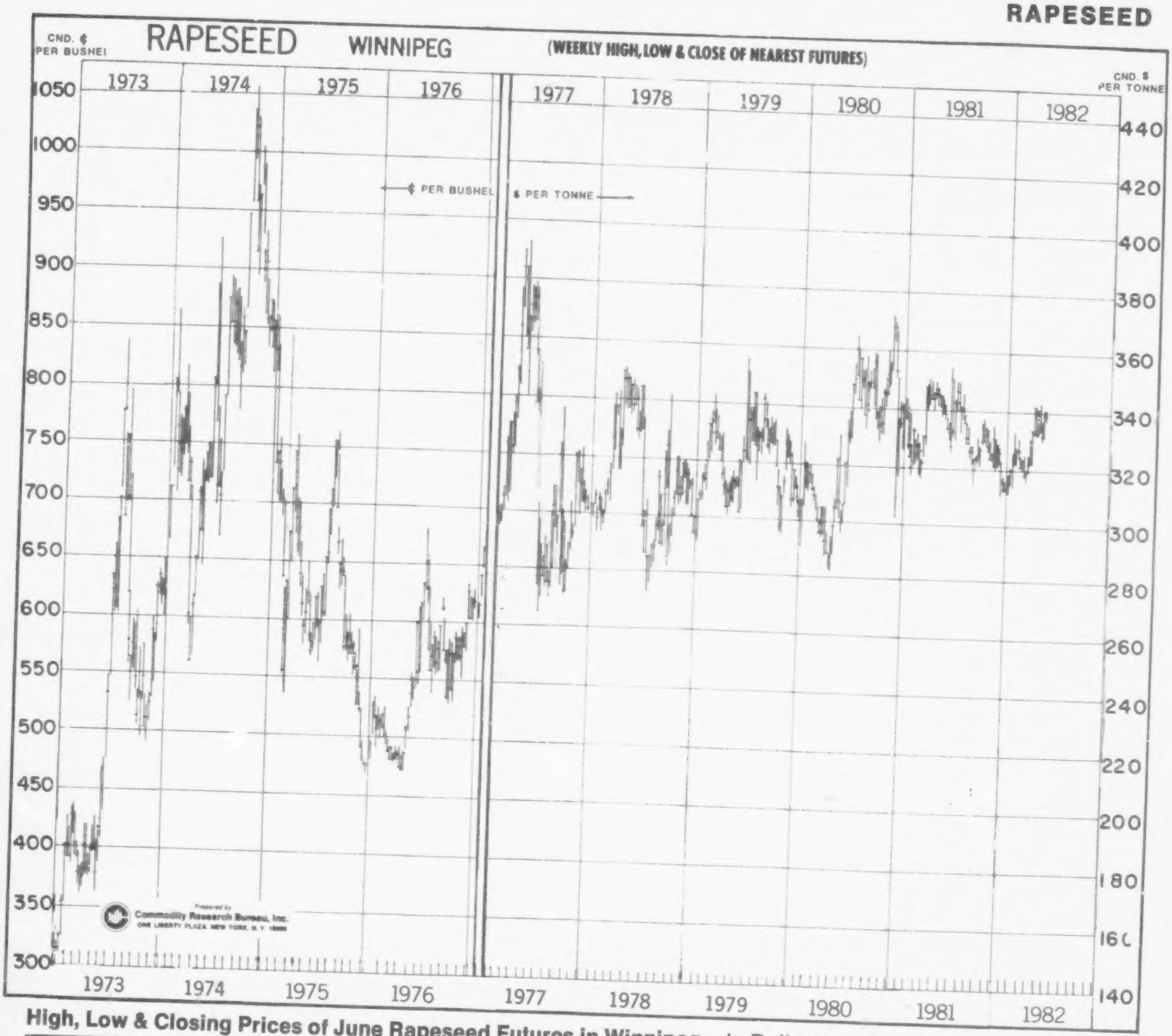
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1971	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
1972	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
1973	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
1974	17.5	18.4	21.0	21.0	30.6	45.0	45.0	45.0	46.2	47.5	45.8	59.0	36.8
1975	59.0	59.0	59.0	59.0	59.0	59.0	59.0	59.0	59.0	51.2	46.0	46.0	56.2
1976	46.0	46.0	46.0	46.0	46.0	46.0	46.0	44.2	39.0	39.0	39.0	39.0	43.5
1977	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0
1978	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0
1979	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0
1980	47.0	47.0	47.0	47.0	47.0	47.0	47.0	46.0	46.0	46.0	46.0	46.0	46.6
1981	56.4	59.0	59.0	59.0	59.0	59.0	59.0	59.0	59.0	59.0	59.0	59.0	
1982	57.0	55.0	56.8										

Source: Economic Research Service, U.S.D.A.

Month End Open Interest of Rapeseed Futures in Winnipeg In 20 Tonne Units

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	9,288	11,435	11,869	11,908	14,442	14,300	17,778	20,456	17,960	18,672	16,707	15,299
1979	15,288	15,164	16,338	15,593	12,993	14,209	12,950	13,596	15,001	21,300	21,827	21,966
1980	15,718	17,516	13,392	14,285	17,722	17,254	17,126	17,108	18,827	22,036	21,911	20,504
1981	15,376	15,326	18,028	18,764	18,000	15,332	14,948	15,316	15,755	16,064	16,260	12,911
1982	13,532	14,970	9,952	12,230								

Source: Winnipeg Commodity Exchange



High, Low & Closing Prices of June Rapeseed Futures in Winnipeg In Dollars per Tonne

Year of Delivery	Year Prior to Delivery									Delivery Year						Life of Delivery Range
	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	
1978 High	—	—	—	—	259.0	268.0	272.0	297.0	302.0	294.5	306.1	338.3	351.5	348.0	345.0	351.5
Low	—	—	—	—	253.0	243.2	244.6	270.2	285.0	279.0	287.0	303.0	316.0	334.8	313.0	243.2
Close	—	—	—	—	253.0	257.3	272.0	288.5	288.5	287.0	301.3	323.9	346.7	340.6	313.0	—
1979 High	—	286.0	284.0	268.0	284.0	288.0	312.8	304.0	307.5	315.5	340.2	337.7	318.4	316.5	354.5	354.5
Low	—	278.5	263.7	255.8	258.0	269.0	282.1	289.5	296.0	294.0	314.4	314.0	301.8	305.0	302.5	255.8
Close	—	286.0	265.2	263.0	270.1	280.0	302.3	300.0	297.0	314.5	336.0	316.3	307.3	307.5	329.5	—
1980 High	301.0	315.9	354.5	351.0	340.0	339.0	340.5	339.0	331.8	342.0	330.5	319.9	295.1	331.2	326.2	354.5
Low	295.0	299.0	315.9	319.0	321.0	326.7	314.1	320.0	318.5	301.0	318.5	291.0	282.0	287.6	299.5	282.0
Close	299.0	315.8	329.5	325.5	337.0	335.6	324.0	330.5	319.5	324.5	319.4	291.0	289.5	299.9	317.0	—
1981 High	—	—	—	370.0	383.5	389.0	382.5	375.5	387.5	375.9	351.8	350.6	350.5	348.3	338.3	389.0
Low	—	—	—	367.5	360.0	365.0	359.1	391.0	325.5	334.0	337.9	334.5	340.0	337.4	326.0	325.5
Close	—	—	—	367.5	372.5	368.5	376.0	387.0	368.0	337.0	345.8	350.0	347.5	339.1	327.2	—
1982 High	—	—	—	396.0	391.0	378.3	371.8	366.5	353.0	344.0	340.8	333.5	342.8			
Low	—	—	—	384.0	375.5	355.0	358.8	341.6	334.6	331.0	328.0	319.8	327.3			
Close	—	—	—	391.0	375.5	360.3	365.4	344.8	335.1	334.5	332.7	327.0	334.1			

Source: Winnipeg Commodity Exchange

Rayon and Other Synthetic Fibers

World Production of Rayon &/or Acetate Filament Yarn & Monofilaments In Thousands of Metric Tons[3]

Year	United States	Bel./Netherlands	Brazil	Canada	France	W. Germany	E. Germany	Un. Kingdom	Italy	Japan	India	Poland	Spain	China	U.S.S.R.	World Total
1969	774.4	110.7	75.0	39.9	117.3	170.6		212.7	205.9	312.4	116.8		43.4		467.4	3,131
1970	730.8	110.1	73.4	30.6	113.8	169.5		200.4	186.3	299.6	121.9		44.8		489.6	3,070
1971[3]	341.4	47.7	33.6	15.1	52.8	75.1	34.0	85.2	83.1	120.9	55.2	28.8	22.5	20.0	230.0	1,401
1972	296.2	47.2	36.7	15.2	49.8	70.6	32.0	67.2	67.8	119.0	61.3	29.2	21.8	22.0	245.3	1,342
1973	288.2	47.1	40.8	15.1	49.2	71.1	33.0	72.6	66.4	128.3	56.8	30.1	21.6	26.4	259.3	1,362
1974	241.9	47.9	35.9	14.6	42.1	69.4	34.0	70.1	54.2	115.6	56.9	30.5	22.0	44.5	267.0	1,302
1975	166.1	35.3	30.7	13.1	28.1	48.8	32.9	62.5	41.3	103.2	54.2	28.3	16.4	49.0	281.4	1,136
1976	160.8	39.0	34.2	5.7	24.4	66.3	36.2	70.6	46.7	109.3	60.6	28.7	15.6	55.0	286.1	1,188
1977	160.0	36.2	28.8	11.0	20.8	63.7	36.0	62.6	44.4	107.4	58.9	28.6	15.0	61.0	295.0	1,172
1978	164.6	36.0	24.1	12.3	19.3	59.7	34.0	59.7	39.3	109.8	62.4	28.0	13.8	65.0	300.0	1,167
1979	169.4	36.1	24.4	14.1	18.5	58.1	35.0	59.2	38.4	114.3	60.5	27.2	12.6	68.0	298.0	1,176
1980[1]	161.3	33.8	26.0	14.0	16.4	65.2	36.5	36.7	36.6	119.3	57.7	25.3	12.9	75.0	305.0	1,159
1981[2]	138.3															1,084
1982																

[1] Preliminary. [2] Estimate. [3] Data prior to 1971 are in MILLIONS OF POUNDS. *Source: Textile Organon*

World Production of Rayon &/or Acetate Staple & Tow In Thousands of Metric Tons[3]

Year	United States	Austria	China	Czechoslovakia	France	W. Germany	E. Germany	Un. Kingdom	Italy	Japan	Poland	Spain	Sweden	India	U.S.S.R.	World Total
1969	801.8	143.5		105.8	171.1	381.0		342.8	233.0	781.5	116.8	79.6	65.9	129.2	491.6	4,694
1970	642.4	149.0		104.9	173.9	301.4		354.3	203.0	785.1	116.6	76.3	65.9	139.8	516.5	4,504
1971[3]	289.5	75.3	25.0	48.1	79.0	89.5	121.0	161.5	95.7	354.4	53.5	38.3	31.8	61.0	243.0	2,054
1972	336.2	82.6	27.4	48.9	84.5	73.0	130.0	172.8	99.7	367.9	59.7	45.7	33.3	70.7	262.4	2,217
1973	327.3	86.1	32.9	45.6	86.2	80.0	132.5	191.4	94.2	383.4	65.1	45.8	33.9	63.2	283.8	2,298
1974	301.8	88.6	55.4	50.5	83.7	80.0	132.0	147.1	85.4	328.7	66.6	46.0	32.6	77.6	301.6	2,230
1975	173.7	74.0	61.0	49.6	55.3	43.0	135.6	126.7	46.3	255.6	67.4	35.8	18.5	67.1	309.0	1,824
1976	220.6	88.9	70.0	50.3	60.3	51.0	136.8	118.6	59.8	250.3	66.9	41.0	30.4	83.7	325.8	2,022
1977	242.7	90.2	77.0	50.6	60.7	46.0	131.0	113.6	62.3	272.7	67.1	43.1	33.1	87.1	334.0	2,109
1978	245.7	96.0	80.0	49.5	55.2	49.0	129.2	124.4	46.9	279.4	65.4	46.6	36.9	92.0	335.0	2,151
1979	252.4	98.8	85.0	36.0	58.9	50.0	130.0	139.2	39.0	290.4	56.6	45.3	36.9	92.2	337.0	2,195
1980[1]	204.3	100.6	95.0	34.9	49.6	46.0	132.0	109.3	27.5	278.0	60.9	40.1	36.5	74.7	345.0	2,085
1981[2]	210.9															2,000
1982																

[1] Preliminary. [2] Estimate. [3] Data prior to 1971 are in MILLIONS OF POUNDS. *Source: Textile Organon*

World[5] Production of Non-Cellulosic Man-Made Fibers (Except Olefin) In Thousands of Metric Tons[8]

	United States															
		Non-Cellulose Fiber[2]														
Year	Text. Glass Fiber[1]	Yarn[3]	Staple[4]	Total	Total[5]	Canada	France	W. Germany	Italy/Malta	Taiwan	Japan	Korea	Benelux	U.S.S.R.	United Kingdom	World Total
1969	501.4	1,767	1,761	3,528	4,029	151.0	344.6	997.2	471.4		1,666		275.2	313.7	642.4	9.211
1970	467.3	1,793	1,793	3,586	4,053	142.5	386.2	1,086	472.7		2.139		267.2	367.5	742.5	10,362
1971[8]	212	873.7	929.2	1,803	2,015	74.7	213.9	599.9	277.3	77.0	1,103	61.6	138.3	203.0	357.5	5,609
1972	259	1,101	1,142	2,242	2,501	75.3	237.9	639.6	291.6	102.1	1,054	81.6	149.2	238.6	373.9	6,377
1973	312	1,323	1,318	2,641	2,953	93.6	266.3	808.4	336.7	129.0	1,247	115.7	163.2	286.9	453.9	7,639
1974	310	1,352	1,233	2,584	2,894	92.0	237.7	764.9	296.7	142.8	1,126	151.7	155.3	318.5	396.1	7,487
1975	248	1,255	1,191	2,445	2,693	95.8	204.5	625.3	276.9	234.6	1,021	262.7	122.9	362.0	361.1	7,353
1976	307	1,266	1,480	2,746	3,052	96.6	248.8	759.4	376.6	272.4	1,204	309.3	146.3	400.0	414.2	8,601
1977	357	1,415	1,622	3,037	3,392	112.8	243.9	690.2	330.1	364.4	1,280	349.9	139.3	456.0	358.8	9,149
1978	419	1,467	1,751	3,218	3,637	123.1	246.4	729.4	354.4	464.2	1,376	432.5	142.7	475.0	406.4	10,034
1979	460	1,595	1,889	3,484	3,944	121.6	224.0	759.5	360.2	521.3	1,363	477.3	135.6	476.0	381.1	10,608
1980[6]	393	1,412	1,831	3,242	3,635	122.0	192.0	720.1	354.8	557.9	1,357	536.4	104.3	550.0	287.6	10,486
1981[7]	472	1,730	1,901	3,631	4,103											10,533
1982																

[1] Textile glass fiber of all types, including some staple. [2] Acrylic fiber, nylon, polyester, saran, etc. [3] Includes monofilaments as well as some saran staple. [4] Includes tow, but does not include some saran staple. [5] The textile glass fiber data are included in the U.S. total & excluded from the rest of the world data. [6] Preliminary. [7] Estimate. [8] Data prior to 1971 are in MILLIONS OF POUNDS. *Source: Textile Organon*

U.S. Rayon and Acetate Distribution In Millions of Pounds

	Yarn & Monofilaments								Staple & Tow & Fiber Fill						
	Producers' Shipments								Producers' Shipments						
	To Domestic Consumers								To Domestic Consumers						
Year	Industrial	Textile	Acetate	Total	Export	Total	Import	Domestic Consump.	Rayon	Acetate	Total	Export	Total	Import	Domestic Consump.
1969	159.0	135.7	444.7	739.4	16.0	755.4	4.1	743.5	737.9	42.3	780.2	5.0	785.2	91.2	871.4
1970	133.4	117.7	444.8	695.9	38.3	734.2	3.7	699.6	599.9	34.3	634.2	7.8	642.0	80.6	714.8
1971	164.5	132.5	432.3	729.3	33.2	762.5	5.2	734.5	643.6	26.2	669.8	3.7	673.5	81.3	751.1
1972	141.1	105.8	385.9	632.8	23.9	656.7	10.8	643.6	690.7	27.7	718.4	2.0	720.4	51.3	769.7
1973	121.8	75.8	392.3	589.9	60.7	650.6	18.1	608.0	709.5	25.0	734.5	14.7	749.2	47.4	781.9
1974	99.4	53.7	320.3	473.4	48.8	522.2	9.2	482.6	569.5	19.7	589.2	36.0	625.2	38.7	627.9
1975	——74.9——		293.7	368.6	32.9	401.5	9.2	377.8	373.4	12.0	385.4	20.2	405.6	37.9	423.3
1976	——65.1——		249.4	314.5	40.3	354.8	25.1	339.6	461.0	11.0	472.0	35.6	507.6	43.2	515.2
1977	——68.1——		259.4	327.5	25.2	352.7	23.5	351.0	444.9	8.0	452.9	62.3	515.2	57.8	510.7
1978	——63.0——		274.6	337.6	28.6	365.2	25.7	363.3	459.2	7.0	466.2	96.5	562.7	41.1	507.3
1979	——55.0——		288.4	343.4	31.8	375.2	13.3	356.7	442.4	7.0	449.4	100.1	549.5	16.5	465.9
1980	——47.5——		269.2	316.7	32.7	349.4	8.3	325.0	390.7	7.0	397.7	61.0	458.7	10.3	408.0
1981[1]	——46.6——		226.3	272.9	34.8	307.7	10.7	283.6	396.9	4.0	400.9	59.8	460.7	16.8	417.7
1982															

[1] Preliminary. *Source: Textile Organon*

U.S. Domestic Shipments of Synthetic Fibers In Millions of Pounds

	Yarn & Monofilaments								Staple & Tow						
	Cellulosic				Non-Cellulosic					Non-Cellulosic					
	Rayon														
Year	Industrial	Textile	Acetate	Total	Nylon	Olefin[2]	Polyester & Other	Total[3]	Rayon	Nylon	Acrylic & Mod-Acrylic	Olefin & Vinyon	Polyester	Total	Textile Glass Fiber
1969	159.0	135.7	444.7	739.4	1,063	188.6	364.5	1,617	737.9	202.7	473.4	61.7	883.3	1,621	460.5
1970	133.4	117.1	444.8	695.9	1,053	187.0	443.0	1,683	599.9	201.2	430.7	57.3	992.9	1,682	404.9
1971	164.5	132.5	432.3	729.3	1,207	246.5	646.9	2,100	643.6	330.1	463.7	58.9	1,111	1,964	466.7
1972	141.1	105.8	385.9	632.8	1,431	312.4	946.8	2,690	690.7	476.6	536.0	63.6	1,287	2,363	569.2
1973	121.8	75.8	392.3	589.9	1,545	395.4	1,334	3,274	709.5	586.8	662.0	69.3	1,530	2,848	676.0
1974	99.4	53.7	320.3	473.4	1,409	426.3	1,307	3,142	569.5	487.8	514.9	59.7	1,388	2,451	630.8
1975	——74.9——		293.7	368.6	1,290	436.1	1,489	3,215	373.4	557.9	467.3	54.7	1,474	2,554	533.5
1976	——65.1——		249.4	314.5	1,279	482.0	1,386	3,147	461.0	665.0	517.3	58.6	1,777	3,019	677.6
1977	——68.1——		259.4	327.5	1,396	539.6	1,526	3,461	444.9	791.7	619.8	81.3	1,880	3,373	791.6
1978	——63.0——		274.6	337.6	1,539	579.7	1,523	3,642	459.2	876.4	571.6	90.0	1,968	3,506	886.7
1979	——55.0——		288.4	343.4	1,631	624.2	1,542	3,798	442.4	913.2	546.6	119.3	2,134	3,714	922.6
1980	——47.5——		269.2	316.7	1,539	611.7	1,363	3,532	390.7	711.2	585.3	115.0	2,071	3,483	874.4
1981[1]	——46.6——		226.3	272.9	1,404	628.3	1,430	3,483	396.9	696.4	494.1	132.0	2,005	3,328	982.0
1982															

[1] Preliminary. [2] Includes film fiber. [3] Includes Saran & Spandex. *Source: Textile Organon*

U.S. Mill Consumption of Fiber & Products & Per Capita Consumption

	Mill Consumption (Million Pounds)											Per Capita Consumption (Pounds)			
Year	Yarn & Monofilaments	Staple & Tow	Total R. & A.[2]	Noncellulosic Fiber	Textile Glass Fiber	Waste	Total Man-made	Cotton	Wool	Silk	Grand Total	Man-made	Cotton	Wool	Total
1969	743.5	871.4	1,615	3,468	460.5	139.2	5,552	3,973	354.9	3.3	9,883	27.9	20.9	2.2	51.0
1970	699.6	714.8	1,415	3,670	404.9	138.4	5,501	3,774	273.3	1.8	9,550	27.7	19.7	1.7	49.1
1971	734.5	751.1	1,486	4,557	466.7	185.0	6,529	3,965	219.3	1.7	10,715	32.9	20.4	1.3	54.6
1972	643.6	769.7	1,414	5,568	569.2	202.1	7,566	3,850	246.9	2.1	11,665	37.5	19.9	1.3	58.7
1973	608.0	781.9	1,390	6,599	676.0	223.3	8,664	3,643	182.1	3.3	12,493	41.7	18.3	1.0	61.0
1974	482.6	627.9	1,111	5,960	630.8	198.6	7,698	3,306	116.5	2.6	11,123	35.9	16.0	.7	52.6
1975	377.8	423.3	801.1	6,081	533.5	204.6	7,417	3,069	132.0	1.0	10,618	34.7	14.9	.7	50.3
1976	339.6	515.2	854.8	6,520	677.6	223.1	8,053	3,389	145.9	2.8	11,590	37.5	16.9	.9	55.3
1977	351.0	510.7	861.7	7,228	791.3	254.6	8,888	3,170	133.9	1.6	12,193	41.1	15.8	.9	57.8
1978	363.3	507.3	870.6	7,461	886.7	210.3	9,228	3,040	141.6	2.0	12,412	42.4	15.8	1.0	59.2
1979	356.7	465.9	822.6	7,692	922.6	130.4	9,446	3,066	134.4	1.5	12,648	41.6	14.8	.9	57.3
1980	325.0	408.0	733.0	7,145	874.4	83.0	8,760	3,064	137.8	1.5	11,962	37.5	14.7	.9	53.1
1981[1]	283.6	417.7	701.3	7,026	982.0	148.8	8,723	2,703	152.7	2.0	11,580	38.0	14.3	1.0	53.3
1982															

[1] Preliminary. [2] Rayon and acetate. *Source: Textile Economics Bureau*

RAYON AND OTHER SYNTHETIC FIBERS

Man-Made Fiber Production in the United States In Millions of Pounds

	Rayon & Acetate															
	Rayon Yarn				Staple & Tow				Non-Cellulosic Fiber						Producers' Waste Shipments	
Year	Indust.	Textile	Acet. Yarn	Total Yarn	Rayon	Acetate	Total	Total	Yarn	Staple	Total	Total Ray. & Acet. & Non-Cel.	Textile Glass Fiber	Total Man-made Fiber	Rayon	Non-Cell.
1972	146.7	105.0	401.4	653.1	713.2	28.0	741.2	1,394.3	2,773.3	2,582.4	5,355.7	6,750.0	571.6	7,321.6	38.5	202.7
1973	121.7	76.4	437.2	635.3	696.7	25.0	721.7	1,357.0	3,339.6	2,969.8	6,309.4	7,666.4	688.0	8,354.4	36.8	274.8
1974	112.9	58.9	361.6	533.4	645.4	20.0	665.4	1,198.8	3,443.0	2,780.6	6,223.6	7,422.4	682.9	8,105.3	29.9	246.4
1975	46.1	18.7	301.3	366.1	370.9	12.0	382.9	749.0	3,208.0	2,676.8	5,885.7	6,634.7	546.5	7,181.2	13.2	228.7
1976	52.3	15.3	286.9	354.5	475.4	12.0	486.4	840.9	3,306.4	3,320.2	6,626.6	7,467.5	676.0	8,143.5	14.7	262.3
1977	55.3	15.4	282.0	352.7	527.0	8.0	535.0	887.7	3,674.1	3,653.8	7,327.9	8,215.6	786.7	9,002.3	18.5	291.0
1978	47.0	15.0	300.9	362.9	534.6	7.0	541.6	904.5	3,830.3	3,952.7	7,783.0	8,687.5	923.3	9,610.8	15.7	263.9
1979	41.7	15.1	316.6	373.4	549.4	7.0	556.4	929.8	4,154.3	4,282.3	8,436.6	9,336.4	1,014.4	10,380.8	17.2	238.6
1980	32.2	15.0	308.5	355.7	443.3	7.0	450.3	806.0	3,744.3	4,148,2	7,892.5	8,698.5	867.3	9,565.8	13.5	170.2
1981[1]	33.4	15.1	257.0	305.5	460.6	4.0	464.6	770.1	3,814.8	4,191.1	8,005.9	8,776.0	1,041.1	9,817.1	15.3	193.0

[1] Preliminary. *Source: Textile Organon*

United States Imports of Man Made Fiber Manufactures[1] In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1972	29,040	29,316	31,372	25,152	31,125	31,935	34,598	43,050	36,396	39,560	42,331	34,027	407,805
1973[1]	39.34	37.03	37.20	29.61	33.64	30.97	29.45	23.54	17.91	22.73	20.25	13.37	335.35
1974	26.30	25.10	25.76	27.12	31.12	33.45	38.37	36.53	31.53	35.88	31.03	28.49	371.25
1975	28.77	24.38	28.76	27.85	30.03	35.69	40.32	37.93	37.97	41.04	35.15	33.67	400.38
1976	36.38	29.56	36.71	35.57	38.84	47.48	54.32	46.68	41.67	36.88	40.68	34.55	479.32
1977	34.20	32.55	37.00	36.29	43.86	59.03	54.82	55.44	51.85	46.69	37.57	41.83	531.13
1978	45.54	46.68	46.34	53.87	59.74	67.70	70.41	64.90	58.31	50.47	41.08	37.54	642.59
1979	47.07	36.31	39.06	38.47	45.19	53.03	52.25	50.84	44.58	42.35	40.18	35.64	524.97
1980	36.39	39.90	39.62	37.37	46.72	55.92	57.69	50.18	52.11	49.19	40.10	35.46	540.64
1981	46.72	38.55	43.81	45.53	57.83	58.01	66.66	69.32	56.77	67.24	49.12	39.51	639.07

[1] Data prior to 1973 are for imports are for staple, tow, and tops. Imports of yarns and monofilaments are very small. (In THOUSANDS OF POUNDS.) *Source: Department of Commerce*

United States Exports of Man Made Fiber Manufactures[1] In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1972	24,292	26,051	29,779	22,488	27,064	25,813	25,545	26,246	23,054	29,013	27,864	35,675	322,890
1973[1]	37.95	41.86	43.28	48.23	48.11	46.50	45.33	38.30	56.64	54.96	52.24	55.66	569.27
1974	31.00	33.70	38.34	39.82	37.03	37.22	30.46	30.88	30.17	30.66	28.05	23.50	390.73
1975	22.84	20.83	24.50	31.56	27.85	25.73	24.67	27.07	29.20	32.31	28.62	28.55	323.73
1976	26.13	27.22	32.09	29.11	30.14	29.91	25.99	25.59	31.78	30.76	31.33	32.12	352.17
1977	27.67	30.77	34.18	32.02	31.77	31.55	29.36	27.08	35.02	25.81	27.50	34.35	367.08
1978	27.84	29.24	36.83	35.57	39.06	36.63	32.06	35.38	38.12	43.68	44.41	42.88	441.70
1979	42.86	43.91	53.20	45.03	49.28	52.81	44.92	46.69	50.61	56.16	53.00	58.12	596.58
1980	47.25	59.36	69.55	69.01	64.65	70.85	58.44	63.79	63.29	75.94	64.97	64.27	771.54
1981	53.16	53.50	67.33	64.83	58.05	58.78	47.59	49.70	48.77	50.98	46.95	38.08	637.72

[1] Data prior to 1973 are for exports of yarns, monofilaments, staple, tow, & tops. (In THOUSANDS OF POUNDS.) *Source: Department of Commerce*

Aver. Wholesale Prices of 65% Acetate/35% Nylon Tricot,[1] F.O.B. Mill[2] In $ Per Yd.

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1973	125	126	128	130	131	131	131	132	132	132	132	132	130
1974	132	132	132	135	138	136	135	131	131	131	129	122	132
1975	122	122	122	124	124	127	127	126	136	140	140	N.A.	
1976[1]	.518	.503	.483	.458	.433	.406	.393	.378	.350	.340	.341	.343	.412
1977	.345	.350	.383	.419	.420	.446	.450	.440	.438	.445	.435	.435	.501
1978[3]	—	.443	.451	.456	.467	.472					49.6[3]	49.5	49.2
1979	49.1	47.0	46.9	47.5	47.5	47.0	47.4	46.9	46.1	—	47.1	46.9	47.2
1980	47.6	48.8	49.1	48.6	48.2	47.6	49.0	49.4	51.3	55.1	59.3	57.5	51.0
1981	56.9	56 4	56.8	58.1	57.6	57.4							

[1] Prices prior to 1976 are for YARN, ACRYLIC (spun), knitting—2/20, 3–6 denier IN CENTS PER POUND. [2] Gray, 32 gauge, 54", 3.2 oz./linear yd. [3] Beginning Nov. '78 prices are for 50/50 polyester/carded cotton printcloth, gray, 48", 3.90 yds./lb., 78 & 54–56. *Source: Bureau of Labor Statistics*

Rice

The U.S. 1981 rice crop totaled a record 185.4 million cwt., over 39 million cwt. above the 1980 crop. An increase in harvested acreage to a record 3.804 million acres from 3.312 million in 1980, and above average weather contributed to the bumper crop. Yields increased dramatically and the U.S. average yield was a record 4,873 pounds per acre, 155 pounds greater than the previous record yield in 1971 and 460 pounds above 1980's drought-stressed 4,413 pounds. California averaged a phenomenal 7,200 pounds yield per acre from its 605,000 harvested acres. Texas harvested 579,000 acres with an average yield of 4,700 pounds. Long grain rice accounted for 60 percent of the crop; medium—34 percent; and short—6 percent. Arkansas and Texas were the principal long-grain states, while California accounted for 54 percent of the medium and 88 percent of the short grain crop.

Beginning stocks on August 1, 1981 for the 1981/82 marketing year stood at 16.5 million cwt., off nearly 36 percent from the previous year. However, with the record 1981 crop, total U.S. supply for the 1981/82 marketing year reached an all-time high of 202 million cwt. Stocks as of January 1, 1982 of milled and rough rice were 130.5 million and 8.2 million cwt., respectively. Rough rice stocks by type of grain included 55 percent long, 41 percent medium and 4 percent short. An unusually large 37 percent of rough rice stocks were on farm. With total use of rice expected to rise less than 2 million cwt. in 1981/82, the season ending stocks were projected to more than triple to 54 million cwt.

U.S. exports of rice for the 1981/82 marketing year were projected at 86.5 million cwt. rough basis, off about 5 percent from 1980/81. Sharply reduced sales to South Korea were partly offset by stronger sales in the Mideast and better-than-expected shipments to Africa, particularly Nigeria, and to Italy. PL480 shipments continued to decline due to reduced program allocations.

The U.S. average price for rough rice dropped $2.46 per cwt. the first 5 months of 1981/82, from $11.80 in August to $9.34 in December 1981. For the 1981/82 season, prices were expected to average $9.25 to $10.25 per cwt., down sharply from last season's $12.80. The U.S. average price for rough rice during August–December in 1981, of $10.40 per cwt., was below the 1981/82 $10.68 target price, which made allotment holders eligible for a deficiency payment of 28 cents per cwt. Payments totaled $22 million.

The 1982 U.S. Government Support Program

The 1982 target price for rice was set at $10.85 per cwt., up $.17 from 1981. The 1982 loan rate was increased $.13 from the 1981 level to $8.14 per cwt. The Agriculture and Food Act of 1981 repealed the previously used allotment and marketing quota system. A 15 percent acreage reduction program was announced for the 1982 crop. Participating farmers were required to reduce their acreage planted for harvest by 15 percent from their established rice base. The base was the higher of either the 1981 or the average of the 1980–81 planted acreage. Participation

World Production of Rough Rice In Millions of Metric Tons

Crop Year	Brazil	Burma	China	Vietnam[3]	India	Japan	Indonesia	Rep. of Korea	Bangladesh	Philippines	Pakistan	Taiwan	Thailand	United States	World Total
1969–0	6.3	8.0	95.5	5.1	60.6	17.5	17.5	5.7		5.2		3.0	13.4	4.1	299.9
1970–1	6.3	8.1	97.5	5.7	63.7	15.9	23.1	5.6		5.3		3.2	13.3	3.8	309.1
1971–2	5.4	8.2	100.0	6.1	64.7	13.6	18.7	5.6	15.7	5.1		3.0	13.4	3.9	313.8
1972–3	6.2	7.4	98.0	5.9	58.0	14.9	19.0	5.8	14.8	4.4		3.1	12.2	3.9	302.3
1973–4	6.4	8.6	113.0	6.6	66.1	15.2	21.5	5.8	17.6	5.6	3.7	2.8	14.4	4.2	324.3
1974–5	7.0	8.6	120.0	11.9	59.4	15.4	22.5	6.2	17.1	5.7	3.5	3.3	14.5	5.1	330.0
1975–6	8.5	9.2	119.0	10.9	74.3	16.5	22.6	6.5	18.8	5.8	3.9	3.4	15.2	5.8	352.3
1976–7	8.0	9.3	125.5	11.5	64.2	14.7	23.3	7.2	17.7	6.5	4.0	3.6	15.8	5.3	348.2
1977–8	7.5	9.3	128.5	11.3	79.1	16.4	23.3	8.3	19.5	6.9	4.4	3.6	15.0	4.5	370.1
1978–9	7.6	10.6	137.0	10.0	80.7	15.7	25.8	7.6	19.3	7.2	4.9	3.2	17.5	6.0	385.3
1979–0	9.6	9.7	143.7	10.7	63.6	14.9	26.3	7.1	19.1	7.3	4.8	3.2	15.8	6.0	377.0
1980–1[1]	8.6	13.0	139.3	10.0	79.9	12.2	29.8	6.2	20.8	7.3	4.6	2.8	18.5	6.6	395.8
1981–2[2]	8.7	13.6	144.0	10.5	79.6	12.8	32.6	7.0	20.1		4.9		19.5	8.4	409.8
1982–3															

[1] Preliminary. [2] Estimate. [3] Data prior to 1974–5 are for So. Vietnam. *Source: Foreign Agricultural Service, U.S.D.A.*

U.S. Rice (Rough) Production by Type and Variety In Thousand Cwt.

Year	Long Grain	Medium Grain	Short Grain	Total	Year	Long Grain	Medium Grain	Short Grain	Total
1969	43,888	34,508	8,148	91,904	1976	70,051	36,792	8,805	115,648
1970	36,101	31,270	9,955	83,805	1977	62,206	26,272	10,745	99,223
1971	49,973	29,455	8,497	85,768	1978	84,792	36,454	11,924	133,170
1972	42,760	34.184	8,495	85,439	1979	80,692	40,421	10,834	131,947
1973	43,807	39,347	9,611	92,765	1980	86,851	51,407	7,892	146,150
1974	59,934	41,387	11,065	112,386	1981[1]	111,318	62,551	11,501	185,370
1975	63,593	52,255	12,589	128,437	1982				

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

in the acreage reduction program was voluntary, but only participating farmers were eligible for target price protection and the loan program.

World Trends

The 1981/82 world rice crop was estimated by the USDA at a record 410 million tonnes, up over 3 percent from the previous season. However, world rice consumption was expected to about equal production, allowing virtually no change in ending stocks. Among major producers, Burma, Thailand, Indonesia, Pakistan, South Korea, and Japan had large percentage increases in output. China, the largest producer, had a 3-percent rise. The two major rice importing countries in recent years—Indonesia and South Korea—each had sizable production increases.

World rice trade during calendar 1982 was forecast at 12.04 million tonnes, a decline of 7 percent from 1981. The U.S. share in 1982 was forecast to increase to 25 percent from 23 percent in 1981.

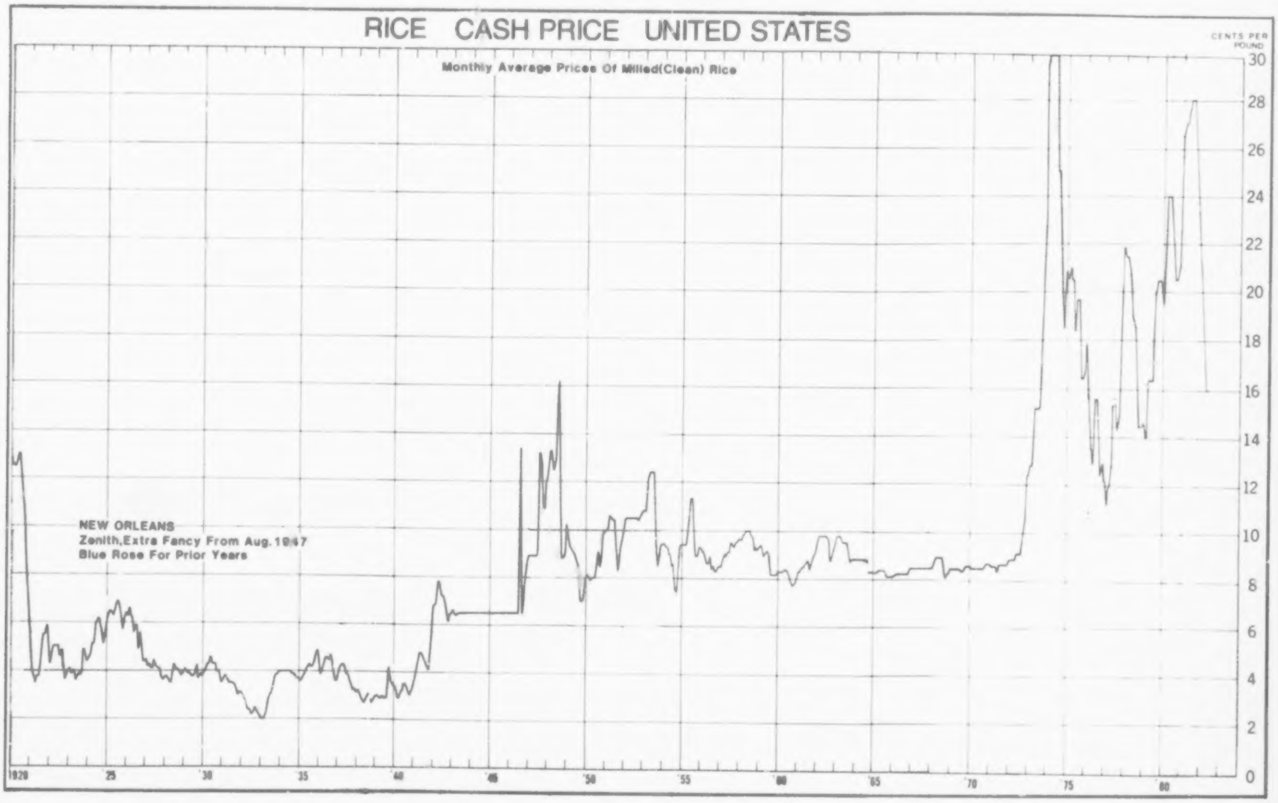
Futures Markets

Milled and rough rice futures are traded on the New Orleans Commodity Exchange.

Average Wholesale Price of Rice[1] No. 2 (Medium Grain) Southwest Louisiana
In Cents Per Pound (In 100 Pound Bags)

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Average
1969–0	8.40	8.50	8.60	8.60	8.60	8.50	8.50	8.50	8.50	8.50	8.50	8.50	8.52
1970–1	8.50	8.50	8.60	8.70	8.70	8.60	8.60	8.60	8.60	8.40	8.70	8.70	8.60
1971–2	8.70	8.70	8.70	8.70	8.90	8.90	8.90	8.90	8.90	9.10	9.10	9.10	8.88
1972–3	9.10	10.00	10.50	12.50	12.50	12.90	12.90	12.90	15.30	15.30	15.30	15.30	12.88
1973–4	16.30	18.50	21.30	29.50	30.00	30.00	30.00	30.00	30.00	30.00	25.00	25.00	26.30
1974–5	23.0	20.0	18.5	20.0	20.8	20.5	21.0	20.5	20.5	18.5	19.5	19.5	20.19
1975–6	19.5	16.8	16.8	17.0	17.8	15.5	15.5	13.5	13.0	15.5	15.5	15.5	16.0
1976–7	13.5	12.5	13.0	12.3	12.3	11.3	11.8	12.1	13.3	15.6	15.5	15.3	13.2
1977–8	14.5	15.0	15.4	20.5	21.5	21.5	—	21.5	20.5	19.0	—	18.5	18.8
1978–9	17.5	14.5	14.5	14.5	14.8	14.0	14.0	14.0	16.5	16.5	16.5	16.5	15.3
1979–0	19.0	20.0	20.5	20.5	19.5	20.0	22.0	23.5	24.0	24.0	22.0	21.0	21.3
1980–1	20.5	20.5	21.0	24.5	26.5	27.0	27.0	27.5	27.5	28.0	28.0	28.0	25.5
1981–2	26.5	25.0	22.5	21.3									

[1] Prior to May 1972 price is for MILLED NATO at New Orleans. *Source: Bureau of Labor Statistics* (0213–0101)



Acreage, Yield, Production, and Prices of Rice in the United States

Crop Year	Acreage Harvested (1,000 Acres)			Yield Per Harvested Acre (In Lbs.)			Production 1,000 Cwt.			Farm Value of Production $1,000	Farm Price of Rough Rice $ Per Cwt.	Wholesale Prices ($ Per Cwt.)	
	Southern States	California	United States	Southern States	California	United States	Southern States	California	United States			Milled No. 2[2]	Houston[3]
1969–0	1,739	389	2,128	3,987	5,525	4,318	69,346	21,492	91,904	455,045	4.95	8.65	9.90
1970–1	1,484	331	1,815	4,373	5,700	4,618	64,938	18,867	83,805	433,186	5.17	8.90	10.05
1971–2	1,487	331	1,818	4,513	5,200	4,718	68,556	17,212	85,768	457,697	5.34	9.15	10.20
1972–3	1,487	331	1,818	4,415	5,700	4,700	66,571	18,868	85,439	574,907	6.73	13.55	14.45
1973–4	1,769	401	2,170	3,970	5,616	4,274	70,244	22,521	92,765	1,279,990	13.80	27.40	31.75
1974–5	2,054	477	2,531	4,252	5,290	4,440	87,165	25,221	112,386	1,261,359	11.20	19.90	22.05
1975–6	2,277	525	2,818	4,284	5,800	4,558	97,536	30,436	128,437	1,071,924	8.35	17.35	18.35
1976–7	2,081	399	2,480	4,490	5,520	4,663	93,445	22,203	115,648	811,358	7.02	14.10	14.95
1977–8	1,941	308	2,249	4,189	5,810	4,412	81,310	17,913	99,223	941,248	9.49	20.75	21.70
1978–9	2,480	490	2,970	4,358	5,220	4,484	107,592	25,578	133,170	1,087,000	8.16	16.20	18.30
1979–0	2,347	522	2,869		6,520	4,599	97,905	34,042	131,947	1,383,993	10.50	21.35	22.05
1980–1[1]	2,747	565	3,312		6,440	4,413	109,764	36,386	146,150	1,740,756	12.80	21.00	25.55
1981–2[1]	3,199	605	3,804		7,200	4,873	141,810	43,560	185,370	1,853,700	10.00		
1982–3													

[1] Preliminary. [2] F.O.B. mills, Houston, Texas (medium grain). [3] Houston, Texas (long grain).
Source: Economic Research Service, U.S.D.A.

Salient Statistics of Rice, Rough & Milled (Rough Equivalent) in the United States In Thousands of Cwt.

Year Beginning August	Supply				Distribution					Government Support Program					
					Domestic					Owned By CCC Aug. 1	Under Price Support			Deliveries to CCC	Support Rate $ Cwt.
	Stocks Aug. 1	Production	Imports[2]	Total Supply	Food[3]	Industry[4]	Seed	Total	Exports		Loans	Purchase Agree.	Total		
1969–0	16,211	91,904	221	107,269	23,527	7,064	2,510	33,101	56,854	6,087	22,671	1,841	24,512	2,993	4.72
1970–1	16,446	83,805	1,446	101,646	25,100	6,800	2,531	34,400	45,500	6,407	20,787	733	21,520	3,528	4.86
1971–2	18,634	85,768	1,100	105,500	25,500	7,400	2,500	35,400	56,900	9,329	31,235	107	31,342	1,214	5.07
1972–3	11,434	85,439	500	97,400	25,100	7,700	3,032	35,700	54,000	2,720	22,926	—	22,926	1	5.27
1973–4	5,139	92,765	200	98,100	26,100	8,100	3,609	37,800	49,700	148	19,146	—	19,146	—	6.07
1974–5	7,842	112,386	—	120,300	28,600	8,400	4,000	41,000	69,500	—	9,256	—	9,256	—	7.54
1975–6	7,057	128,437	—	135,500	27,700	9,100	3,500	40,300	56,500	—	21,459	1,781	23,240	19,187	8.52
1976–7	36,877	115,648	100	152,600	29,200	10,300	3,200	42,700	65,600	19,187	23,415	608	24,023	608	6.19
1977–8	40,500	99,223	100	139,800	23,500	9,900	4,300	37,700	72,800	18,307	19,541	—	19,541	—	6.19
1978–9	27,400	133,170	100	160,700	33,700	11,200	4,300	49,200	75,700	19,266	27,114	—	27,114	—	6.40
1979–0	31,600	131,947	100	163,600	33,200	11,200	4,800	49,200	82,600	9,858	25,897	—	25,897	—	6.79
1980–1[1]	25,700	146,150	—	172,100	38,400	11,000	5,100	54,500	91,400	1,891	24,992	—	24,992	—	7.12
1981–2[5]	16,500	185,370	—	202,000	39,500	12,000	5,000	56,500	91,000	—	40,000				8.01
1982–3[5]	51,000														

[1] Preliminary. [2] Consists mostly of broken rice. [3] Includes shipments to territories and military food use. [4] Primarily for beer-production. [5] Projected. *Source: Agricultural Marketing Service, U.S.D.A.*

World Exports of Rice (Milled Basis), by Country of Origin In Thousands of Metric Tons

Year	Australia	Brazil	Guyana	Burma	Comm. China	Egypt (U.A.R.)	Uruguay	Pakistan	Italy	Japan	Nepal	Taiwan	Thailand	United States	World Total
1969	117	60	74	541	710	770		135	179			35	999	1,850	6,527
1970	111	95	60	719	885	654		130	347			5	1,062	1,740	7,558
1971	186	129	66	800	622	515		197	438			34	1,576	1,415	7,695
1972	154	102	54	244	1,976	298	62	789	238			16	849	1,733	7,547
1973	158	33	49	133	2,096	298	65	771	247			49	849	1,630	7,439
1974	145	57	52	206	1,982	136	73	478	461			5	1,046	1,702	7,908
1975	185	3	83	288	1,440	104	91	498	451			—	933	2,070	7,162
1976	218	76	72	636	1,446	191	115	945	396		15	0	1,870	2,045	9,055
1977	260	408	67	686	1,023	223	120	757	275	50	105	150	2,915	2,270	10,442
1978	337	177	106	375	1,373	150	100	703	409	75	85	238	1,573	2,264	9,413
1979	400	—	85	590	1,095	95	115	1,366	475	564	100	409	2,696	2,267	11,666
1980[1]	321		81	675	1,000	178	165	968	400	653	10	61	2,700	2,977	12,496
1981[2]	425		80	750	600	134	220	1,100		776	75	92	3,049	3,008	12,996
1982															

[1] Preliminary. [2] Estimate. *Source: Foreign Agricultural Service, U.S.D.A.*

RICE

U.S. Exports of Milled Rice[1] by Country of Destination In Thousands of Metric Tons[3]

Crop Year	Belg.-Lux.	South Africa	Canada	Un. Kingd.	Rep. of Korea	Nigeria	Indonesia	Italy	Bangladesh	Liberia	Saudi Arabia	Switzerland	Iraq	Iran	Total All Exports
1969–0		1,764	1,254		4,111		8,190	—		1,061	1,417				39,334
1970–1	*1970–*	1,790	1,163	*1970–*	9,166	*1970–*	6,231	—		895	1,098				33,577
1971–2[3]	*74*	82	62	*74*	495	*74*	354	—	75	37	82	13	—	19	1,807
1972–3	*Avg.*	83	65	*Avg.*	471	*Avg.*	173	—	4	29	57	12	—	34	1,788
1973–4	*(14.1)*	86	81	*(40)*	121	*(2)*	60	—	—	28	94	14	9	42	1,608
1974–5		64	60	32	530	3	42	—	250	23	79	12	110	462	2,231
1975–6		82	71	30	129	12	—	46	245	24	117	14	81	174	1,538
1976–7		96	74	32	75	131	409	36	21	51	72	47	37	457	2,105
1977–8	19.2	71.4	73.9	12.3	—	172.0	467.3	163.2	83.6	41.3	169.7	29.4	89.9	343.7	2,270
1978–9	41.8	103.7	77.2	48.7	38.5	183.6	270.4	136.4	3.0	40.6	234.5	51.1	148.2	348.1	2,431
1979–0[2]	85.0	105.5	77.6	30.1	574.7	137.9	225.1	42.0	—	61.9	169.5	64.3	309.6	31.1	2,706
1980–1[2]					1,282	238.9					270.6		133.7	—	2,858
1981–2[2]					234.6	152.4					189.7		198.3	85.3	3,310

[1] No adjustment of brown & parboiled rice has been made; treated as milled rice. [2] Preliminary. [3] Data prior to 1971–72 are in THOUSANDS OF CWT. *Source: Bureau of the Census, Dept. of Commerce*

Exports of Rice From the United States In Millions of Pounds[1] (Clean Basis)

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Total
1969–0	290.7	254.4	374.6	349.0	361.8	235.5	337.3	306.1	187.6	365.6	498.8	371.5	3,935
1970–1	231.4	189.0	438.1	446.8	220.5	284.0	198.7	259.5	314.6	268.5	365.4	144.3	3,361
1971–2	189.7	439.9	394.7	160.5	232.4	275.6	532.8	219.4	242.4	338.1	532.5	540.6	4,099
1972–3	360.4	241.7	313.3	443.6	407.0	339.8	300.1	478.4	423.5	271.4	159.1	204.3	3,943
1973–4	131.9	215.5	252.8	401.5	405.3	368.5	264.8	286.7	403.7	233.3	311.8	305.5	3,581
1974–5	174.4	329.0	349.8	331.9	442.0	544.9	564.4	556.2	463.9	437.0	555.4	247.7	4,996
1975–6	225.6	164.0	305.8	249.3	396.6	340.1	275.4	298.7	264.4	383.7	348.5	724.9	3,977
1976–7	396.5	319.6	308.2	405.8	574.0	233.2	312.9	487.3	262.7	529.2	380.5	497.8	4,709
1977–8	494.3	511.4	187.6	633.8	464.1	204.2	427.2	293.6	338.7	364.5	693.6	346.5	4,960
1978–9	324.8	545.1	467.0	371.0	595.8	361	416	484	498	531	334	434	5,362
1979–0	310	316	426	320	546	584	557	584	518	585	540	644	5,930
1980–1	419	577	409	474	730	533	613	809	688	794	497	371	6,914
1981–2	453	470	532	583	458	479							
1982–3													

[1] 162 pounds rough--100 pounds clean. *Source: Department of Commerce*

Avg. Price Received by Farmers for Rice[1] in the U.S. In Dollars Per 100 Pounds (CWT.)

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Average[2]
1969–0	4.71	4.99	5.23	5.05	4.98	4.99	4.96	5.01	5.00	4.98	5.10	4.80	4.95
1970–1	5.16	5.18	5.26	5.19	5.09	5.31	5.44	5.36	5.33	5.30	5.20	5.33	5.17
1971–2	5.15	5.24	5.46	5.25	5.30	5.53	5.55	5.60	5.58	5.57	5.58	5.35	5.34
1972–3	5.34	6.37	7.05	7.42	7.64	7.84	8.14	8.26	8.51	8.56	8.74	10.80	6.73
1973–4	10.90	13.30	14.80	16.70	15.50	15.80	16.90	17.20	15.90	17.20	17.50	11.90	13.80
1974–5	10.20	10.90	11.30	11.60	10.90	10.80	11.30	11.10	11.00	11.10	11.20	10.00	11.20
1975–6	9.83	9.19	8.87	8.59	8.51	7.95	7.54	6.17	7.15	7.06	6.82	7.45	8.35
1976–7	6.65	6.56	6.48	6.46	6.57	6.79	6.87	6.81	6.95	7.30	7.24	6.87	7.02
1977–8	8.02	8.12	9.13	10.20	11.00	10.70	10.70	10.70	10.80	10.10	9.58	9.49	9.49
1978–9	8.44	7.56	7.62	7.76	7.98	8.07	7.87	8.18	8.52	8.74	8.73	9.10	8.16
1979–0	10.00	9.81	10.30	9.83	8.41	9.88	11.00	11.70	11.60	11.30	10.20	10.80	10.50
1980–1	10.60	10.20	10.90	11.60	13.10	13.20	13.00	13.40	13.80	13.30	11.90	12.80	12.80
1981–2[3]	11.80	10.70	10.20	9.86	9.34	9.34	9.46	8.99	9.36				
1982–3													

[1] Rough rice. [2] Weighted average by sales. [3] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

Rubber

World natural rubber production in 1981, based on International Rubber Study Group data available in late April 1982, was about 4 percent below estimated 1980 production. World synthetic rubber output was projected to be about unchanged from 1980 production. Incomplete data indicated little change in world consumption of natural and synthetic rubber in 1981, but worldwide sluggish economic activity and reduced demand for rubber tires suggested some increase in world stocks during 1981.

The International Natural Rubber Agreement (INRA) became effective officially on April 15, 1982 with the ratification of the agreement by countries accounting for about 91.5 percent of world production and by countries accounting for nearly 85 percent of world usage of natural rubber. The International Natural Rubber Organization (INRO) by mid-April 1982 had made three calls for contributions from member countries to its buffer stocks operation totaling almost 500 million ringget since October 1981. Buffer stock purchases were initiated by INRO in early November 1981. By mid-April 1982 INRO had purchased more than 100,000 tonnes of various grades of rubber on the international rubber market for the buffer stock in an effort to support depressed prices. Buffer stock purchases could be made only when the average of several grades of rubber declined to a price range of 168 to 179 Malaysian/Singapore cents per kilo (205 to 210 Malaysian cents per kilo basis No. 1 Ribbed Smoked Sheets).

Effective May 8, 1982, the INRO buffer stock price range was reduced 1 percent because the 6-month average of the daily INRO indicator price averaged below the "may buy" level of 179 Malaysian/Singapore cents per kilo. The revised reference price was set at 207.9 cents per kilogram. The new lower intervention price at which the buffer stock manager *may buy* was reduced to 177 cents per kilo from 179 cents, and the upper intervention price at which he *may sell* was reduced to 239 cents from 242 cents. The lower trigger action price, at which the buffer stock manager *must buy* was reduced to 166 cents from 168 cents, and the upper trigger action price at which he *must sell* off buffer stocks was lowered to 249 cents from 252 Malaysian/Singapore cents per kilogram.

Natural rubber prices slumped to a 6-year low in early 1982 reflecting the recession and resultant reduced demand for rubber from the bellwether tire industry. However, concentrated buying not associated with INRO buffer stock purchases pushed rubber futures prices up sharply in early March 1982.

Futures Market

Rubber futures are traded on the London Commodity Exchange.

World Rubber Production[1] In Thousands of Metric Tons

	Natural										Synthetic						
Year	Sri Lanka	India	Indonesia	Malaysia	Philippines	Thailand	Liberia	Brazil	China	World Total	Canada	W. Germany	Japan	United States	United Kingdom	U.S.S.R.	World Total
1970	159.2	89.9	815.2	1,269	20.1	290.0	83.4	25.0	—	3,103	205.4	301.9	697.5	2,232	315.6	800.0	5,890
1971	141.4	98.9	819.3	1,319	21.3	318.8	74.2	24.2	5.0	3,085	197.4	306.4	779.8	2,277	285.4	950.0	6,215
1972	140.4	109.1	773.7	1,304	22.4	336.9	83.3	25.8	10.0	3,120	195.5	300.0	819.4	2,455	316.6	1,150	6,765
1973	154.7	123.2	885.8	1,542	25.9	390.0	85.5	23.4	15.0	3,505	229.8	392.9	967.5	2,607	364.4	1,350	7,760
1974	132.0	128.4	855.0	1,525	37.2	379.5	86.2	18.6	20.0	3,445	208.8	371.8	857.9	2,396	335.8	1,500	7,575
1975	148.8	136.0	822.5	1,459	52.3	355.0	82.8	19.3	25.0	3,315	173.3	315.9	788.7	1,990	260.8	1,600	6,850
1976	152.1	147.8	847.5	1,612	58.5	411.9	82.4	20.3	35.0	3,585	209.9	372.6	941.3	2,425	320.4	1,700	8,025
1977	146.2	151.6	835.0	1,588	56.3	430.9	80.0	22.6	50.0	3,625	237.9	414.3	971.0	2,660	329.2	1,800	8,615
1978	155.7	133.0	902.5	1,582	56.6	467.0	78.5	23.7	75.0	3,755	248.3	407.0	1,029	2,662	293.7	1,950	8,910
1979	152.7	147.2	905.0	1,569	60.0	531.2	73.0	25.0	97.5	3,860	282.5	418.5	1,107	2,725	277.7	2,025	9,360
1980[2]	133.2	155.4	1,020	1,552	65.0	501.1	69.5	27.8	100.0	3,820	252.8	389.9	1,094	2,150	211.8	2,040	8,620
1981[3]	125	148	925	1,535	65	497	68	30	104	3,685	262.0	403	1,012	2,250	194	2,023	8,600

[1] Including rubber in the form of latex. [2] Preliminary. [3] Estimate. *Source: Rubber Study Group*

World Consumption of Natural and Synthetic Rubber In Thousands of Metric Tons

	Natural									Synthetic						
Year	Australia	Brazil	Canada	France	W. Germany	Japan	Un. Kingdom	United States	World Total	Canada	France	W. Germany	Japan	Un. Kingdom	United States	World Total
1970	40.2	36.7	50.6	158.2	200.7	283.0	195.2	568.3	2,990	135.5	260.9	358.1	496.0	277.5	1,949	5,635
1971	40.5	41.8	52.0	159.2	198.2	295.0	184.8	587.1	3,093	158.3	283.5	369.2	525.0	274.8	2,127	6,185
1972	46.3	44.2	60.4	160.2	193.0	312.0	174.0	650.9	3,230	172.8	297.8	362.4	588.0	278.2	2,328	6,730
1973	52.1	51.2	60.4	162.3	205.6	335.0	186.5	712.0	3,403	186.2	304.7	442.6	710.0	330.6	2,440	7,575
1974	59.4	57.9	63.3	162.4	193.9	312.0	167.3	738.4	3,518	181.3	308.4	404.2	615.0	279.2	2,210	7,450
1975	49.9	58.7	72.3	156.2	197.1	285.2	170.5	666.0	3,368	179.3	277.7	359.9	584.8	266.3	1,964	7,028
1976	50.0	66.1	84.7	166.8	195.2	302.0	168.3	686.7	3,505	203.9	286.1	438.3	658.0	327.4	2,172	7,915
1977	41.4	71.4	90.4	163.6	176.5	320.0	172.4	801.8	3,715	207.1	294.9	431.2	690.0	321.0	2,645	8,615
1978	41.1	72.5	89.1	163.2	184.9	355.0	139.2	770.8	3,725	203.9	296.2	429.5	741.0	313.4	2,519	8,770
1979	45.4	75.9	93.8	177.0	184.5	390.0	137.5	740.4	3,870	232.0	317.8	447.1	830.0	301.1	2,501	9,125
1980[1]	42.2	81.1	80.0	187.7	179.7	427.0	130.8	585.0	3,760	200.0	321.9	421.3	885.0	248.2	1,980	8,640
1981[2]	44	76	82	184	170	433	128	640	3,760	212	297	396	860	230	2,060	8,565

[1] Preliminary. [2] Estimate. *Source: Rubber Study Group*

World Stocks[1] of Natural Rubber, January 1 In Thousands of Metric Tons

	In Producing Countries								In Consuming Countries (Commercial Stocks)										
Year	Brazil	Cambodia	Sri Lanka	Indonesia	Malaysia (Peninsular)	Singapore	Thailand	Total	Australia	Canada	China	France	W. Germany	India	Japan	United Kingdom	United States	Total
1969	9.6	7.0	29.2	75.0	109.9	52.9		320.0	5.0	3,7		13.7	16.3	20.5	41.3	23.3	109.5	555.0
1970	8.1	6.8	33.3	75.0	101.1	44.0	22.5	310.0	5.5	4.2		25.7	15.0	34.6	54.2	26.7	108.2	695.0
1971	8.4	2.5	34.6	75.0	152.5	57.3	25.0	380.0	4.9	5.2	112.5	29.6	17.5	41.6	63.4	25.9	104.2	760.0
1972	11.6	2.5	33.1	75.0	163.9	55.1	27.5	385.0	4.4	6.6	72.5	26.5	15.7	47.5	84.3	29.8	135.5	765.0
1973	8.6	7.5	29.0	75.0	195.6	52.1	27.5	415.0	3.5	6.8	60.0	27.7	11.8	56.0	64.3	27.4	118.6	695.0
1974	9.7	6.8	46.5	75.0	188.6	68.6	32.5	450.0	5.3	6.8	122.5	28.9	11.1	54.5	95.1	28.5	106.0	765.0
1975	12.9	6.3	44.7	75.0	201.1	43.4	32.5	435.0	5.7	8.5	115.0	33.4	12.7	47.8	90.8	23.0	117.9	800.0
1976	12.0	5.3	26.0	75.0	230.5	59.2	37.5	475.0	4.0	6.8	155.0	23.8	12.5	54.0	104.6	24.2	116.0	785.0
1977	11.3	3.0	33.9	75.0	239.1	38.7	56.9	495.0	4.7	8.2	125.0	24.1	12.1	60.2	94.8	31.2	138.5	805.0
1978	13.6	2.5	38.8	75.0	214.8	33.7	60.8	470.0	5.0	11.7	137.5	23.0	12.4	57.4	79.3	28.7	143.4	785.0
1979	19.1	2.5	47.4	75.0	245.5	35.8	60.3	505.0	2.7	8.3	137.5	20.1	13.7	42.9	90.7	29.0	142.3	755.0
1980	20.8	2.0	61.3	75.0	240.1	51.1	44.7	515.0	3.8	7.3	135.0	20.3	13.5	54.6	76.5	27.6	144.6	770.0
1981[2]	20.8	2.0	58.5	75.0	250.4	46.3	61.0	530.0	3.2	6.0	130.0	19.6	13.5	40.1	106.9	21.4	126.7	740.0
1982[3]	20		46	75.0	253	48	69	535	3	9	75.0	18	13	39	124	19	123	705.0
1983																		

[1] Exclusive of "Stock Afloat" and unreported gov't. stockpiles. [2] Preliminary. [3] Estimate.
Source: Rubber Study Group (London)

Net Exports of Natural Rubber from Producing Areas In Thousands of Metric Tons

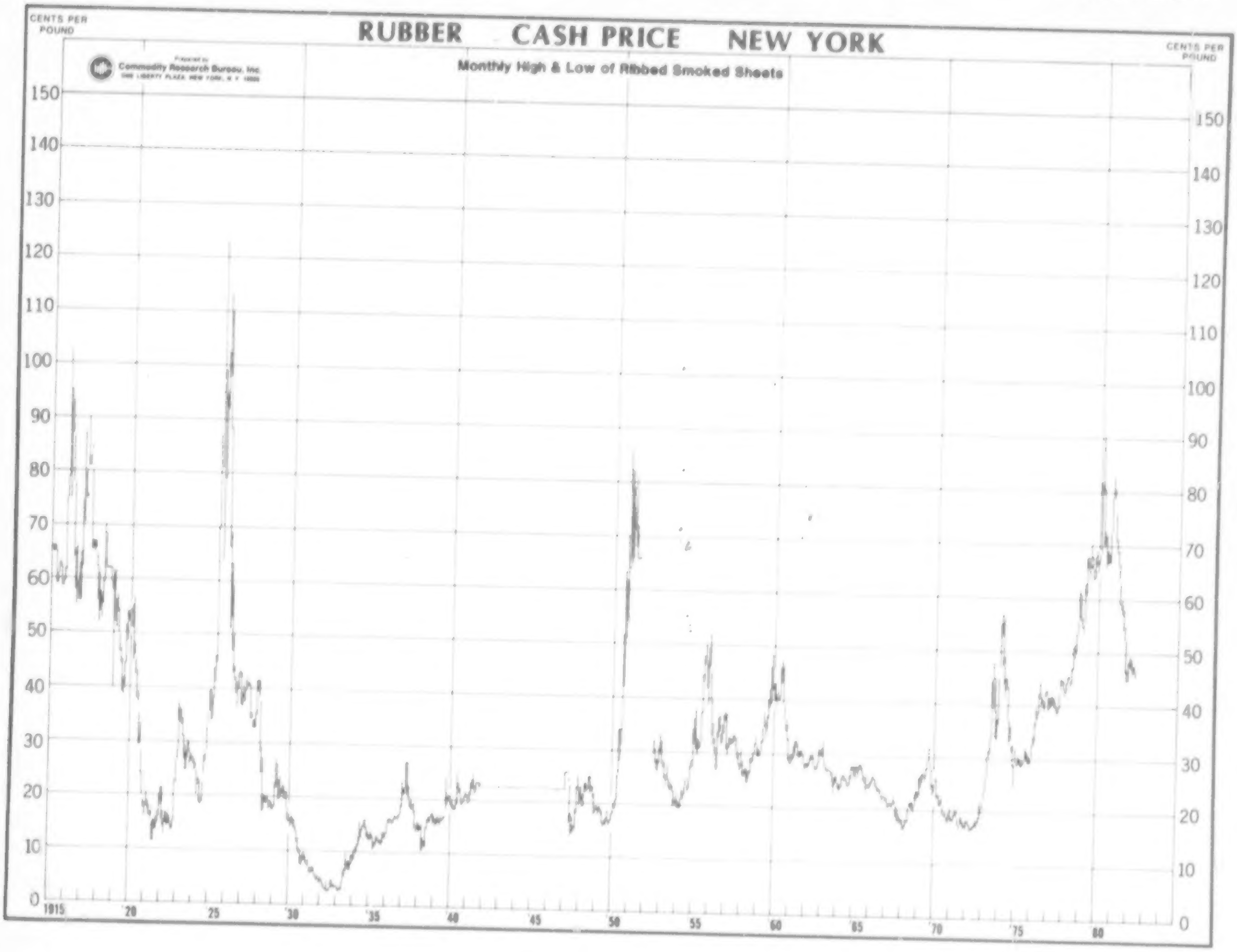
Year	Burma	Cambodia	Sri Lanka (Ceylon)	Indonesia	Malaysia (Peninsular)	Sabah	Sarawak	Thailand	Vietnam	Zaire	Liberia	Nigeria	Other Africa	Papua New Guinea	World Total
1969	10.0	47.7	141.6	833.4	1,223	29.4	39.2	276.4	19.5	35.7	66.9	56.8	54.5	6.0	2,883
1970	9.6	14.5	154.1	766.2	1,251	31.8	21.7	279.2	23.0	40.0	83.4	59.3	64.3	6.5	2,785
1971	11.9	.5	137.8	757.8	1,308	28.6	19.5	307.3	31.1	40.0	74.2	50.2	67.0	6.0	2,835
1972	10.0	9.3	138.3	733.9	1,285	26.3	19.9	324.4	21.8	40.0	83.3	41.2	66.8	5.9	2,810
1973	10.0	19.2	131.1	841.5	1,514	35.3	41.8	368.2	20.5	40.0	85.5	49.4	72.3	5.9	3,180
1974	10.0	26.4	127.6	794.7	1,467	31.6	32.6	365.2	23.0	26.6	86.2	60.0	59.3	5.6	3,110
1975	10.0	10.0	160.9	788.3	1,363	32.0	29.0	334.7	7.5	25.0	82.8	52.7	56.5	5.5	2,920
1976		21.0	136.9	811.5	1,504	35.8	40.3	373.0	34.0		80.7	32.5	60.0	4.6	3,165
1977		14.0	134.5	800.2	1,530	38.8	37.6	404.0	33.0		80.0	35.4	60.0	4.2	3,210
1978		16.0	138.0	863.2	1,489	36.8	39.6	441.8	35.0		78.0	29.4	57.8	4.1	3,245
1979		9.5	128.2	861.0	1,537	33.2	38.6	517.8	40.0		73.0	26.4	51.5	4.0	3,320
1980[1]		—	120.9	976.1	1,417	30.8	35.2	456.8	35.0		69.5	14.6	57.0	4.0	3,260
1981[2]		5	117	900	1,380	28	32	440	30		70	9	52	5	3,000
1982															

[1] Preliminary. [2] Estimate. *Source: Rubber Study Group* (London)

U.S. Imports of Natural Rubber (Includes Latex & Guayule) In Thousands of Long Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total[1]
1969	21.81	49.00	59.78	54.39	48.90	46.67	40.84	55.19	49.49	59.45	49.27	50.51	585.28
1970	59.0	44.1	56.8	45.7	42.1	41.6	37.8	33.7	46.6	46.7	46.9	48.9	549.9
1971	45.2	44.7	41.1	42.8	49.8	74.5	47.6	69.6	54.3	44.7	42.1	56.4	612.7
1972	57.9	51.7	64.0	47.6	49.8	36.4	38.7	50.7	39.3	54.7	55.3	56.0	602.2
1973	57.7	48.1	59.4	43.3	55.5	53.4	40.7	66.3	63.7	60.2	56.3	38.3	642.9
1974	53.2	59.1	63.4	50.2	65.3	53.2	73.5	55.0	68.3	35.1	45.2	59.8	681.3
1975	68.2	41.3	51.5	52.3	32.7	58.4	52.7	59.7	54.3	57.1	66.2	62.2	656.6
1976	66.1	55.6	72.1	69.4	46.8	65.7	58.4	40.3	67.5	50.0	52.3	68.8	712.9
1977[2]	70.2	55.6	82.3	72.2	50.0	71.2	72.9	49.3	76.3	73.2	37.4	82.0	792.4
1978[2]	46.7	45.7	71.8	83.4	76.0	54.4	47.8	71.0	77.1	54.9	46.1	71.5	746.2
1979[2]	72.8	64.2	72.8	89.9	55.0	82.0	56.2	58.3	58.9	46.1	43.6	47.9	747.7
1980[2]	76.8	56.0	74.0	38.9	55.3	44.5	38.5	31.4	55.9	31.8	50.3	45.1	598.3
1981[2]	30.1	86.6	53.4	67.6	66.4	50.5	41.6	43.4	62.8	69.4	56.2	49.1	
1982[2]	51.0												

[1] Includes latex and guayule. [2] Preliminary. *Source: Department of Commerce*



Average Spot Crude Rubber Prices (Smoked Sheets[1]) in New York In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1969	22.1	23.1	25.9	27.0	26.0	26.8	28.5	31.4	27.9	26.5	25.0	23.8	26.2
1970	25.5	25.1	22.3	22.1	21.8	21.6	20.0	19.5	19.1	18.3	18.4	19.3	21.8
1971	18.4	18.0	18.3	19.4	20.0	17.8	16.6	18.0	17.9	17.6	17.3	17.1	18.0
1972	18.0	17.8	17.0	16.5	16.9	17.3	17.5	17.5	18.0	19.4	20.5	21.0	18.1
1973	22.8	25.5	28.6	30 8	31.0	36.8	41.3	41.3	36.4	33.6	39.5	54.0	35.1
1974	53.8	53.8	48.8	42.8	43.8	42.0	34.3	34.8	32.0	32.0	27.5	31.5	39.8
1975	29.0	29.5	29.3	29.3	28.5	29.3	31.8	30.3	30.8	30.0	30.0	30.8	29.9
1976	33.0	35.8	37.0	38.8	40.5	44.0	40.1	40.5	39.6	42.0	43.0	40.0	39.5
1977	40.8	40.8	41.6	40.6	40.8	39.6	39.1	39.9	44.8	44.3	43.8	42.9	41.6
1978	43.0	44.6	45.5	43.9	45.0	49.0	49.4	52.0	54.4	54.3	58.1	55.8	49.6
1979	54.4	57.0	61.5	67.4	75.4	68.8	63.8	65.5	64.0	68.5	67.0	67.9	65.1
1980	73.0	86.5	73.3	72.3	69.0	68.5	67.3	68.0	72.8	79.0	—	73.0	73.0
1981	71.3	69.0	65.0	59.0	58.0	57.0	56.0	54.0	50.4	—	45.6	48.3	57.6
1982	48.8												

[1] No. 1, ribbed, plantation rubber. *Source: Bureau of Labor Statistics* (07-11-02.01)

RUBBER

Consumption of Natural Rubber in the United States In Thousands of Metric Tons[1]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1969	51.8	47.0	50.8	50.0	51.3	50.2	44.2	46.9	52.4	55.6	48.3	49.9	598.3
1970	53.0	51.0	52.9	49.8	37.8	45.8	44.4	45.0	48.3	46.7	41.5	43.2	559.3
1971	46.2	48.3	54.4	49.7	49.7	52.2	43.5	50.9	53.6	54.1	49.8	50.0	577.8
1972	55.3	52.7	59.1	51.9	56.1	53.2	40.9	55.3	54.1	58.5	52.6	52.9	640.6
1973	58.1	56.8	63.2	59.4	57.3	54.5	49.0	56.4	56.3	63.4	57.1	54.0	685.44
1974[1]	65.5	59.4	64.0	59.7	60.8	60.3	51.4	59.9	60.3	69.7	58.2	50.0	719.04
1975	61.2	53.9	52.9	56.3	58.5	58.4	49.4	54.8	61.3	62.0	47.9	53.4	669.97
1976	71.6	59.6	71.7	66.7	44.2	67.5	50.5	42.0	76.2	64.5	56.9	59.4	730.73
1977	70.2	66.8	74.5	68.5	66.8	68.2	50.4	62.8	64.6	63.6	61.3	62.5	780.13
1978	59.2	61.1	63.8	61.2	68.0	61.9	51.7	69.1	65.6	69.5	70.9	62.8	764.65
1979[2]	68.3	66.6	74.5	61.8	60.2	59.0	57.9	63.2	57.7	65.2	55.6	47.9	739.00
1980[2]	62.9	57.3	55.7	46.9	42.3	41.3	38.8	43.2	49.4	49.5	50.3	48.7	586.15
1981[2]	49.0	52.6	55.4	55.1	53.9	59.5	56.4	51.1	52.1	57.3	49.7	42.6	634.7
1982													

[1] Data prior to 1974 are in THOUSANDS OF LONG TONS. [2] Preliminary. *Source: Rubber Manufacturers' Association*

Stocks of Natural Rubber in the United States, Beginning of Month In Thousands of Metric Tons[1]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1969	107.76	98.00	92.15	104.71	107.43	108.52	107.35	104.91	104.45	107.41	104.49	103.06
1970	106.5	104.9	98.6	95.1	96.4	98.3	89.7	92.4	94.7	96.7	92.4	93.6
1971	102.6	91.4	92.9	102.7	98.6	105.9	104.9	122.0	125.6	131.4	124.9	126.4
1972	133.3	128.0	128.0	133.2	129.7	117.0	109.1	102.9	112.3	109.5	109.6	112.3
1973	116.7	122.8	116.8	120.5	117.5	122.2	115.9	113.7	117.2	128.7	122.4	122.5
1974[1]	122.4	124.0	120.1	129.5	130.3	131.0	132.6	155.4	155.2	143.0	129.9	124.5
1975	137.5	125.6	126.9	126.9	125.4	113.1	125.2	118.7	116.8	107.0	104.9	110.7
1976	105.4	99.8	158.2	127.0	140.9	104.7	102.3	106.8	92.6	104.9	64.5	71.9
1977	125.3	119.9	127.0	123.8	118.4	120.5	119.7	131.7	139.7	133.0	137.5	129.4
1978	127.6	123.3	116.4	117.1	115.6	122.8	123.4	125.4	126.1	127.7	133.5	124.0
1979[2]	125.6	121.4	115.6	116.1	136.6	130.2	137.7	146.0	144.4	135.6	135.0	124.5
1980[2]	132.1	131.4	135.3	141.4	152.4	145.7	144.4	149.9	138.5	132.9	129.5	123.1
1981[2]	126.7	128.0	125.4	122.8	127.6	124.1	119.5	113.5	111.2	114.4	123.0	130.5
1982[2]	142.4											

[1] Data prior to 1974 are in THOUSANDS OF LONG TONS. [2] Preliminary. *Source: Rubber Manufacturers' Association*

Stocks of Synthetic Rubber in the United States, Beginning of Month In Thousands of Metric Tons[1]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1969	370.0	377.5	386.0	395.3	398.7	404.4	410.6	420.9	428.4	423.8	417.1	424.4
1970	441.0	434.4	436.7	433.3	422.4	457 5	455.5	464.7	479.4	481.8	488.3	499.3
1971	514.8	526.3	517.1	497.6	491.2	501.8	487.8	505.3	483.9	468.3	462.1	480.3
1972	488.2	487.4	478.7	480.1	492.7	491.3	485.1	519.2	512.6	515.5	504.4	495.7
1973	495.7	471.9	473.1	454.8	461.6	469.4	469.9	499.3	501.6	511.2	500.9	494.7
1974[1]	521.0	508.9	507.4	489.4	478.1	503.1	505.6	567.6	583.5	569.1	560.3	585.7
1975	618.7	596.0	590.2	479.3	426.6	424.7	408.2	390.8	378.2	368.0	358.9	365.3
1976	369.9	405.1	406.4	386.7	416.4	453.9	472.7	499.1	513.6	475.5	464.7	449.0
1977	458.1	441.4	431.8	407.6	412.9	409.3	402.2	430.4	430.3	422.3	424.5	424.0
1978	426.8	431.0	427.9	434.5	446.9	441.4	433.1	456.5	445.1	435.8	425.3	419.9
1979[2]	424.1	407.1	400.0	393.6	398.9	391.5	401.3	411.3	402.2	402.8	389.9	402.1
1980[2]	402.9	439.9	436.2	427.6	452.2	445.1	429.2	391.2	372.3	339.7	325.4	328.9
1981[2]	341.8	364.5	354.6	347.0	365.9	368.3	359.8	369.4	353.4	333.5	352.6	364.4
1982[2]	349.0											

[1] Data prior to 1974 are in THOUSANDS OF LONG TONS. [2] Preliminary. *Source: Department of Commerce*

Production of Synthetic Rubber in the United States In Thousands of Metric Tons[1]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1969	181.63	174.97	193.14	186.22	191.42	183.57	179.34	182.24	190.23	200.93	187.86	198.64	2,250
1970	193.1	178.9	186.8	178.8	182.4	179.8	181.5	187.3	182.9	185.0	179.4	181.1	2,197
1971	183.6	166.5	181.8	184.1	196.5	182.1	187.5	187.0	187.0	193.8	194.9	196.1	2,241
1972	200.0	193.0	210.1	208.7	210.7	191.0	195.5	202.7	200.4	211.6	201.7	199.1	2,417
1973	216.1	208.0	216.6	223.1	221.2	199.9	210.0	220.4	210.7	227.5	212.6	219.4	2,585
1974[1]	226.1	212.0	229.5	224.1	225.7	212.5	206.0	211.3	208.2	205.1	185.9	154.8	2,498
1975	155.9	136.7	137.1	138.7	153.6	149.8	144.9	172.7	182.0	194.3	185.7	189.2	1,938
1976	191.5	193.1	210.5	204.2	191.4	176.3	156.7	160.7	192.7	209.5	206.3	210.9	2,304
1977	204.0	193.0	213.1	204.8	211.5	201.8	191.3	198.8	201.7	205.6	195.4	196.6	2,418
1978	198.2	193.8	210.3	214.9	211.2	194.4	195.9	205.7	207.4	212.3	212.1	219.1	2,475
1979[2]	207.9	200.8	232.1	216.7	223.3	210.7	202.9	202.8	210.0	213.8	206.0	207.6	2,535
1980[2]	195.6	194.7	206.8	192.4	159.6	129.6	110.3	123.7	149.8	174.6	178.5	193.7	2,015
1981[2]	193.5	169.7	200.4	180.9	175.9	158.2	161.5	159.7	168.9	170.0	157.7	125.5	2,021
1982													

[1] Data prior to 1974 are in THOUSANDS OF LONG TONS. [2] Preliminary. *Source: Department of Commerce*

Consumption of Synthetic Rubber in the United States In Thousands of Metric Tons[1]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1969	171.4	165.2	175.9	165.2	167.6	166.8	149.4	159.7	178.5	190.8	165.0	168.6	2,024
1970	175.8	170.8	181.5	173.1	131.8	158.8	152.9	154.9	160.4	163.9	144.4	149.6	1,918
1971	163.7	163.5	187.8	174.0	174.2	184.5	152.1	176.7	186.1	190.3	173.3	178.7	2,093
1972	182.2	186.8	201.4	189.7	197.0	197.7	152.1	191.9	195.3	210.2	194.0	193.5	2,292
1973	206.5	199.8	220.6	199.0	197.7	196.1	180.3	197.8	197.4	219.7	196.9	189.0	2,401
1974[1]	222.6	203.5	220.0	208.1	204.1	199.4	177.4	204.0	198.6	213.6	174.5	148.8	2,356
1975	178.4	162.4	143.3	167.5	165.7	170.1	154.3	171.5	183.2	201.2	157.7	167.0	2,022
1976	183.8	195.0	221.9	169.6	151.5	146.7	118.2	142.5	220.2	213.3	211.9	200.6	2,175
1977	217.6	203.6	232.6	203.1	218.8	208.6	161.1	209.8	209.0	205.7	190.9	203.4	2,464
1978	193.7	193.2	206.2	197.5	212.7	194.7	170.6	213.9	211.7	220.3	212.1	209.8	2,436
1979[2]	226.0	201.4	224.4	201.5	212.0	179.6	176.5	202.3	187.9	202.8	174.5	163.3	2,340
1980[2]	170.8	176.1	191.1	148.9	135.7	120.1	131.0	133.7	166.0	167.9	157.7	155.1	1,854
1981[2]	153.0	166.7	194.0	144.9	167.1	154.1	144.7	165.0	156.7	163.8	141.1	131.9	1,890
1982[2]													

[1] Data prior to 1974 are in THOUSANDS OF LONG TONS. [2] Preliminary. *Source: Department of Commerce*

Exports of Synthetic Rubber from the United States In Thousands of Long Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1969	4.50	7.08	13.55	25.03	23.22	21.60	18.32	23.65	21.68	24.44	20.32	23.11	226.49
1970	23.4	23.7	22.3	26.1	25.3	27.3	23.2	23.3	22.1	24.1	24.5	26.2	290.1
1971	19.8	23.3	27.3	24.4	25.9	20.8	24.4	29.4	35.0	14.2	9.8	15.5	269.8
1972	26.8	26.7	20.0	16.8	20.0	18.1	20.1	22.1	16.5	24.0	21.9	24.0	257.1
1973	23.65	22.21	22.99	22.37	24.18	23.58	20.86	18.97	29.34	25.01	21.60	21.10	275.84
1974	22.41	20.55	27.76	27.50	26.01	21.06	21.08	25.78	21.05	18.00	19.13	16.80	267.12
1975	14.52	17.05	15.06	17.17	15.69	16.78	16.24	18.36	19.28	20.64	21.15	22.57	214.50
1976	21.24	22.55	25.15	21.38	22.55	22.48	24.75	22.70	20.59	21.59	19.86	21.13	267.99
1977	19.11	20.97	24.34	21.48	22.06	20.78	24.72	14.86	26.15	14.59	13.80	17.13	239.98
1978	16.94	18.86	22.55	19.48	24.90	22.28	19.35	20.04	20.77	22.22	23.81	23.77	254.96
1979	23.62	22.29	27.74	29.43	28.74	34.61	34.51	39.37	34.90	38.61	36.53	34.76	385.11
1980	31.46	34.48	41.98	41.68	46.88	37.33	36.54	30.46	25.51	33.45	30.72	32.31	422.78
1981	31.21	31.65	38.73	31.77	32.00	28.55	26.27	21.97	24.40	23.94	22.49	21.65	334.63
1982													

Source: Department of Commerce

RUBBER

Production of Auto. Pneumatic Casings[2] & Motor Vehicle Registrations in the U.S. In Ths. of Casings

Year	Total Production of Tires Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total	Regis.[1] (Dec. 31)
1969	18,081	17,170	18,269	17,283	16,882	17,435	15,447	15,829	17,752	19,151	16,738	17,789	207,826	105.1
1970	18,174	17,522	17,606	17,216	12,642	15,658	15,466	14,657	15,885	15,938	14,560	15,079	190,403	108.3
1971	16,790	17,678	19,693	17,987	18,036	18,911	15,954	17,640	19,204	19,454	17,447	17,584	216,361	113.0
1972	19,064	19,132	20,584	19,005	19,725	20,270	14,765	18,608	19,352	20,999	18,721	19,387	229,611	118.8
1973	21,001	19,993	22,229	19,193	18,693	17,752	14,287	17,325	17,727	19,841	18,035	17,343	223,418	125.7
1974	20,366	19,349	20,497	18,334	18,379	17,830	14,484	17,454	17,426	19,737	15,245	12,294	211,390	130.0
1975	14,753	13,184	12,107	15,222	15,677	16,678	14,531	16,413	17,878	18,821	15,212	16,215	186,705	133.0
1976	17,598	18,200	20,552	16,085	9,856	10,453	8,025	8,954	18,096	21,113	18,827	20,194	187,953	138.5
1977	20,638	20,094	22,640	20,087	19,512	20,734	15,050	19,495	19,321	18,926	17,716	17,425	231,638	143.8
1978	18,290	18,319	18,987	18,828	19,148	18,946	15,108	19,245	19,155	20,497	18,299	18,869	223,406	148.8
1979[3]	20,352	19,592	21,807	18,609	18,544	15,603	14,904	16,911	15,985	17,775	14,480	12,340	206,687	154.1
1980[3]	15,188	15,059	15,082	13,678	11,370	10,716	10,206	12,057	13,911	15,790	12,861	13,346	159,263	159.0
1981[3]	15,463	15,641	16,834	15,466	15,183	15,406	14,277	14,902	15,851	16,534	13,750	11,855	181,162	
1982[3]														

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[1] Registrations, in millions, of all privately & publicly owned vehicles (except military). [2] Passenger cars, buses, trucks & motorcycle tires. [3] Preliminary. *Sources: Rubber Manufacturers' Association; Motor Vehicle Mfg. Association*

Stocks of Auto. Pneumatic Casings & Passenger[1] Car Registrations in the U.S. In Ths. of Casings

Year	Total Stocks of Tires Jan. 1	Feb. 1	Mar. 1	April 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1	Regis.[1] (Dec. 31)
1969	42,128	45,124	48,469	50,365	48,131	47,433	45,135	44,317	44,686	43,386	42,321	44,898	86.9
1970	49,152	53,750	57,105	56,400	54,620	49,670	45,196	46,055	45,758	45,758	45,586	48,111	89.2
1971	50,175	52,894	56,462	57,656	54,436	53,454	50,821	50,397	50,401	49,396	50,083	51,015	92.8
1972	54,982	59,380	62,689	63,234	60,896	59,753	58,836	57,836	56,895	54,965	55,769	56,319	97.1
1973	60,255	63,646	66,419	66,708	62,872	60,485	56,834	52,341	50,392	47,775	45,636	46,472	102.0
1974	50,275	53,308	57,056	60,553	59,020	58,995	56,322	53,469	53,260	51,645	50,851	53,321	104.9
1975	55,242	58,758	60,970	57,721	54,082	52,037	49,803	46,990	47,405	45,711	46,002	47,560	106.7
1976	50,020	53,172	55,395	54,837	49,125	40,259	32,405	25,581	21,285	24,594	27,581	30,200	110.2
1977	34,768	39,010	43,212	45,616	45,832	46,231	44,887	43,460	45,229	44,542	43,841	45,176	113.7
1978	47,181	51,523	54,621	51,986	50,006	49,277	46,293	44,280	44,057	41,796	40,135	40,394	116.6
1979[2]	43,472	47,212	51,284	52,223	53,540	53,033	[illegible],362	49,397	48,422	46,002	44,357	44,546	120.2
1980[2]	44,873	46,760	49,993	50,471	49,220	46,972	42,817	40,079	37,057	33,730	32,112	32,363	123.5
1981[2]	33,298	40,188	43,258	43,686	42,393	40,615	38,570	37,116	36,709	36,088	36,556	41,112	
1982[2]	40,863												

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[1] Registrations in millions, of (Passenger cars only) privately and publicly owned vehicles (except military). [2] Preliminary. *Sources: Rubber Manufacturers' Association; Motor Vehicle Mfg. Association*

How to keep your Commodity Year Book statistics up-to-date continuously throughout the year.

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Rye

The 1981 U.S. rye crop totaled 18.6 million bushels, up about 13 percent from the previous year's 16.5 million bushel crop. An increase in yield to 26.7 bushels per acre (vs. 24.4 bushels in 1980) accounted for the additional production as acreage harvested remained stable at 700,000 acres.

Despite increased production, the U.S. rye supply in 1981/82 declined to 22.8 million bushels (vs. 28.7 million in 1980/81). May 31, 1981 ending stocks totaled 4.1 million bushels (vs. 12.2 million on May 31, 1980), due to exports of 7.5 million bushels in the 1980/81 season. With 1981/82 rye exports projected by the USDA to total 2.0 million bushels, 1981/82 ending stocks were projected at 4.0 million bushels, the lowest level since 1977/78.

Acreage seeded to rye in 1982 was expected to remain in the recent 2.5 to 2.6 million acre range, but major rye grain producing states—Minnesota, North and South Dakota, and Nebraska—increased plantings by 12 percent. Thus, 1982 harvested acreage could be greater than in 1981.

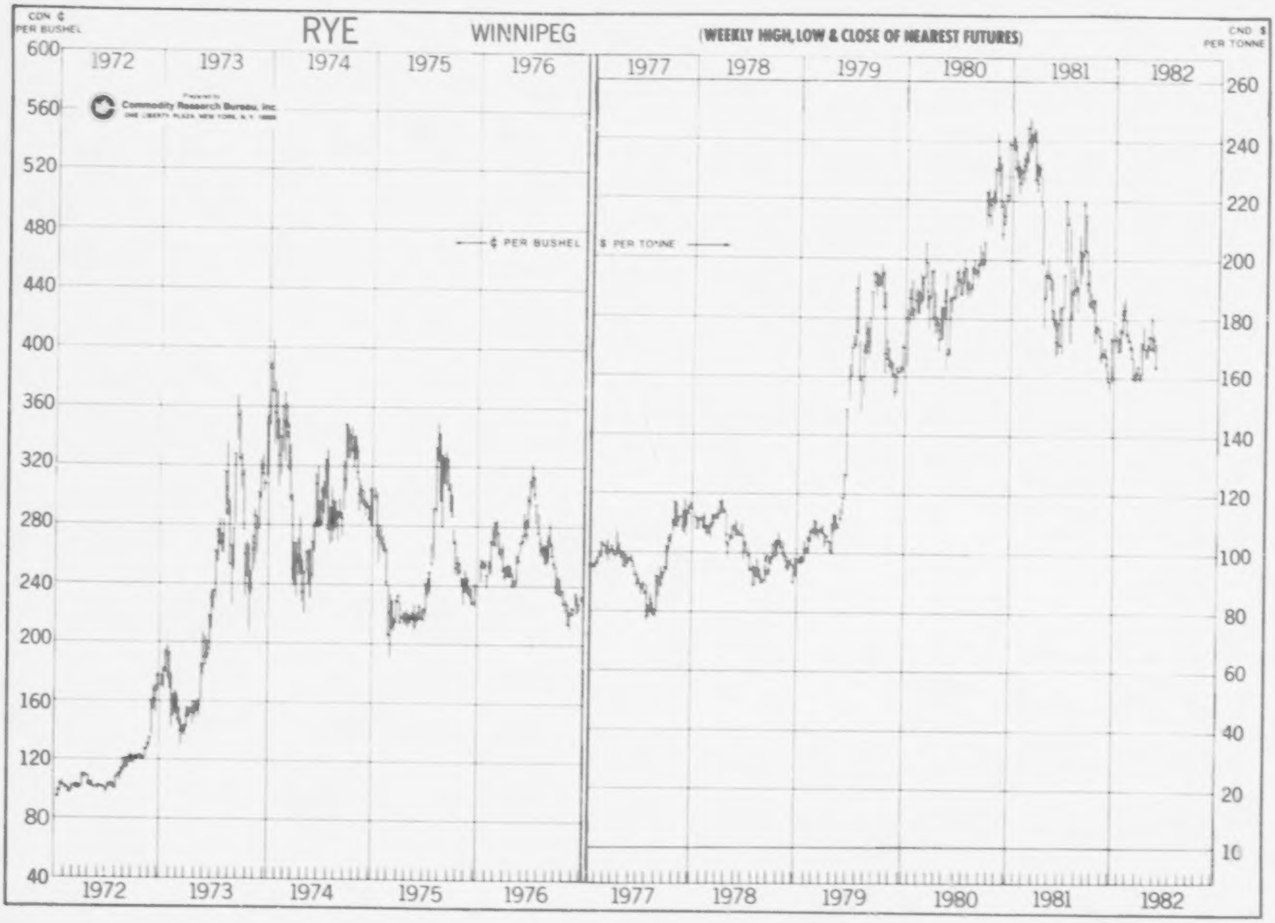
Canadian rye production in 1980/81 totaled 448,100 tonnes according to the Canadian Grain Commission. Producer deliveries during the 1981/82 crop year (which began August 1, 1981) up to February 17, 1982 totaled 425,100 tonnes vs. 268,700 in the same period the previous season. Exports of Canadian rye reached a record 446,000 tonnes during the 1980/81 season. Beginning stocks for the 1981/82 crop year were 169,000 tonnes vs. 279,000 the previous year.

U.S. Government Price Support

The loan rate for 1982 crop rye is $2.17 per bushel, up $0.13 from the 1981 loan rate. Rye is not eligible for entry into the Grain Reserve or for target price protection.

Futures Market

Rye futures are traded on the Winnipeg Commodity Exchange.



RYE

World Production of Rye In Thousands of Metric Tons

Crop Year	Argentina	Austria	Canada	Czechoslovakia	Denmark	France	Germany West	Germany East	Hungary	Netherlands	Poland	Spain	Turkey	U.S.S.R.	United States	World Total
1969–0	377	440	419	687	126	330	2,928	1,544	235	207	8,166	348	770	9,800	767	28,057
1970–1	181	363	570	454	134	306	2,701	1,483	155	172	5,433	256	680	10,800	936	25,596
1971–2	256	448	557	619	150	308	3,188	1,754	182	209	7,827	269	900	10,600	1,252	29,605
1972–3	500	402	344	633	155	350	2,954	1,947	171	151	8,149	263	755	9,600	741	28,212
1973–4	613	400	363	688	140	327	2,693	1,699	175	105	8,268	252	690	10,759	660	28,859
1974–5	306	415	480	671	168	315	2,559	1,949	175	78	7,881	254	560	15,218	483	32,629
1975–6	273	347	523	530	163	292	2,126	1,563	147	63	6,270	241	750	9,064	457	23,702
1976–7	330	410	440	561	214	284	2,100	1,455	156	65	6,922	214	740	13,991	381	29,397
1977–8	170	351	392	540	320	375	2,546	1,500	142	74	6,257	205	690	8,471	462	23,440
1978–9	210	410	605	625	315	435	2,548	1,895	136	68	7,434	251	620	13,603	665	30,698
1979–0[1]	202	278	525	482	257	355	2,189	1,830	100	49	5,201	215	620	8,100	569	21,770
1980–1[2]	190	383	448	585	199	407	2,189	1,700	130	40	6,600	290	600	9,800	419	24,806
1981–2[2]															473	

[1] Preliminary. [2] Estimate. *Source: Foreign Agricultural Service, U.S.D.A.*

Salient Statistics of Rye in the United States

	Supply						Disappearance							Acreage		
	Stocks, June 1						Domestic Use									
Year Begin. June 1	Privately Owned[2]	Gov't.[3]	Total Stocks	Production	Imports	Total Supply	Food	Alc. Beverages	Seed	Feed[5]	Total	Exports	Total Disappearance	Planted	Harvested for Grain	Yield Per Harvested Acre
	Thousands of Bushels													Mil. Acres		Bushels
1969–0			17,294	30,204	472	47,970	5,392	4,310	6,054	9,529	25,285	805	26,090	3,959	1,291	23.4
1970–1			21,880	36,840	1,047	59,767	5,430	3,522	6,873	11,407	27,232	3,204	30,436	4,196	1,427	25.8
1971–2			29,331	49,223	241	78,795	5,195	3,005	5,262	16,276	29,738	2,177	31,915	4,842	1,751	28.1
1972–3			46,880	28,256	154	75,290	5,122	3,038	5,321	16,458	29,939	6,535	36,474	3,458	1,050	26.9
1973–4			38,816	24,677	1	63,494	6,250	2,547	4,967	8,042	21,806	27,513	49,319	3,380	955	25.8
1974–5	14,175	—	14,175	17,506	277	31,958	5,459	1,386	4,215	7,811	18,871	6,465	25,336	2,828	784	22.3
1975–6	6,622	—	6,622	15,924	944	23,524	4,172	2,060	4,217	7,554	18,003	1,117	19,120	2,829	728	21.9
1976–7	4,404	—	4,404	14,891	248	19,500	3,696	1,930	4,217	5,304	15,147	38	15,100	2,652	719	20.7
1977–8	4,418	—	4,418	16,543	127	21,100	3,648	1,875	4,806	7,000	17,100	24	17,100	2,652	677	24.4
1978–9	4,137	—	4,137	24,065	145	28,200	3,690	2,369	4,600	8,100	18,800	400	19,200	2,865	926	26.0
1979–0	8,973	—	8,973	22,389	—	31,400	3,500	2,100	4,000	7,100	16,700	2,400	19,200	2,921	869	25.8
1980–1[1]	12,000	192	12,192	16,483	—	28,700	3,500	2,100	4,200	7,300	17,100	7,500	24,600	2,537	675	24.4
1981–2[4]	4,000	145	4,145	18,621	—	22,800	3,500	2,100	4,200	7,000	16,800	2,000	18,800	2,594	697	26.7
1982–3																

[1] Preliminary. [2] Includes total loans. [3] Uncommitted, gov't only. [4] Forecast. [5] Residual; approximates total feed use.
Source: Economics Service, U.S.D.A.

Production of Rye in the United States In Thousands of Bushels

Year	Illinois	Indiana	Kansas	Michigan	Minnesota	Georgia	Nebraska	No. Dakota	Ohio	Oklahoma	Oregon	So. Dakota	Virginia	Texas	Wisconsin	So. Carolina
1969	576	525	1,121	1,120	2,268	1,692	2,565	5,175	403	980	390	7,128	442	722	280	
1970	529	485	1,892	1,134	2,850	1,656	4,750	5,249	336	936	250	8,768	486	566	253	
1971	529	432	2,640	850	5,404	1,955	5,880	9,750	396	780	260	12,320	475	378	288	
1972	529	300	500	806	2,990	1,500	1,440	4,615	256	1,260	200	9,108	408	630	210	
1973	462	299	735	675	3,150	1,425	1,300	3,039	232	1,333	168	7,480	322	648	189	
1974	361	216	266	450	1,550	1,900	900	2,650	180	595	184	4,278	324	300	240	
1975	374	234	168	456	2,225	1,350	855	2,975	210	570	192	2,346	230	760	315	
1976	315	230	136	468	2,048	2,090	765	2,831	210	608	168	1,485	264	378	252	
1977	330	260	180	456	2,436	1,995	1,050	2,080	248	646	125	3,480	350	400	364	640
1978	368	175	315	600	2,352	2,530	760	5,400	186	570	168	6,200	425	406	357	836
1979	391	208	504	625	2,275	2,310	770	4,200	155	910	144	5,700	384	513	368	609
1980	368	182	210	504	1,900	1,995	666	1,470	231	816	150	4,030	325	494	368	616
1981[1]	336	234	252	532	2,883	2,730	798	2,560	150	680	150	3,220	364	475	408	726
1982																

[1] Preliminary, December estimate. *Source: Crop Reporting Board, U.S.D.A.*

U.S. Rye Crop Production Reports and CCC Operations In Thousands of Bushels

Year Begin. June 1	Official Crop Reports				National Average Support Rate		Placed Under Loan	Direct Purchases	Total	Delivered to CCC	Total Stocks Ending May 31			
	July 1	Aug. 1	Dec. 1	Final	$ Per Bushel	% of Parity					Ending Carryover[1]	CCC Uncommitted	Privately Owned[3] Under Loan[4]	Privately Owned[3] Other
1970–1	35,745	36,186	38,552	36,840	1.02	68	10,880	1,288	12,168	11,246	29,331	16,889	4,250	8,192
1971–2	51,179	52,306	50,935	49,223	.89	57	18,958	1,238	20,196	11,500	46,880	28,073	12,715	6,092
1972–3	30,798	31,315	29,536	28,256	.89	56	6,695	195	6,890	1,500	38,816	—	8,788	30,028
1973–4	24,865	25,506	26,398	24,677	.89	51	443	2	445	—	14,175	—	80	14,095
1974–5	22,020	19,616	19,293	17,506	.89	46	196	—	196	—	6,622	—	30	6,592
1975–6	18,830	18,551	17,875	15,958	.89	39	87	—	87	—	4,403	—	47	4,468
1976–7[2]	16,957	17,382	16,667	14,951	1.20	48		—	100	—	4,414		—	
1977–8[2]	17,787	18,242	16,998	17,312	1.70	61		—	900	—	4,418		—	
1978–9[2]	28,518	28,567	26,160	26,160	1.70	56		—	3,000	—	4,137		—	
1979–0[2]	23,638	23,736	24,549	22,389	1.79	49			2,000	—	8,973		—	
1980–1[2]	15,784	16,189	16,265	16,483	1.91	51			450	—	12,192		—	
1981–2[2]	16,743	17,083	18,621								4,145			
1982–3														

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[1] Old-crop rye under loan at end of crop year. [2] Preliminary. [3] Derived by subtracting CCC stocks & loans outstanding from ending carryover. [4] Includes previous crops under reseal. *Source: Economic Research Service; U.S.D.A.*

United States Rye Quarterly Supply and Disappearance In Millions of Bushels

Periods Begin. June 1	Supply				Disappearance							Ending Stocks		
					Domestic Use									
	Beginning Stocks	Production	Imports	Total Supply	Food	Alc. Beverages	Seed	Feed[2]	Total	Exports	Total Disappearance	Gov't. Owned	Privately Owned	Total Stocks
1977–8	4.4	16.5	.1	21.1	3.7	1.9	4.8	6.8	17.1	[3]	17.1	—	4.0	4.0
June–Sept.	4.4	16.5	.1	21.0	1.2	.6	2.4	2.7	6.9	[3]	6.9	—	14.1	14.1
Oct.–Dec.	14.1	—	—	14.1	.9	.5	2.2	1.7	5.3	[3]	5.3	—	8.8	8.8
Jan.–Mar.	8.8	—	—	8.8	.9	.5	.2	1.4	3.0	[3]	3.0	—	5.8	5.8
Apr.–May	5.8	—	[3]	5.9	.6	.3	—	1.0	1.9	[3]	1.9	—	4.0	4.0
1978–9	4.0	24.1	.1	28.2	3.7	2.4	4.6	8.1	18.8	.4	19.2	—	9.0	9.0
June–Sept.	4.0	24.1	.1	28.2	1.1	.5	2.3	1.8	5.7	[3]	5.7	—	22.5	22.5
Oct.–Dec.	22.5	—	—	22.5	1.1	.6	2.1	3.5	7.3	[3]	7.3	—	15.2	15.2
Jan.–Mar.	15.2	—	[3]	15.2	1.0	.7	.2	1.6	3.5	[3]	3.5	—	11.7	11.7
Apr.–May	11.7	—	[3]	11.7	.5	.6	—	1.2	2.3	.4	2.7	—	9.0	9.0
1979–0	9.0	22.4	[3]	31.4	3.5	2.1	4.0	7.1	16.7	2.4	19.2	.2	12.0	12.2
June–Sept.	9.0	22.4	[3]	31.4	1.2	.6	2.0	2.2	6.0	.6	6.6	.2	24.6	24.8
Oct.–Dec.	24.8	—	[3]	24.8	.9	.4	1.8	2.4	5.5	1.6	7.1	.2	17.5	17.7
Jan.–Mar.	17.7	—	[3]	17.7	.9	.6	.2	1.0	2.7	[3]	2.7	.2	14.8	15.0
Apr.–May	15.0	—	[3]	15.0	.5	.5	[3]	1.5	2.6	.2	2.8	.2	12.0	12.2
1980–81	12.2	16.5	[3]	28.7	3.5	2.1	4.2	7.3	17.1	7.5	24.6	.1	4.0	4.1
June–Sept.	12.2	16.5	[3]	28.7	1.1	.4	2.1	3.4	7.0	3.2	10.2	.2	18.3	18.5
Oct.–Dec.	18.5	—	[3]	18.5	1.0	.5	1.9	2.7	6.1	3.1	9.2	.3	9.0	9.3
Jan.–Mar.	9.3	—	[3]	9.3	.8	.7	.2	[3]	1.7	.7	2.4	.3	6.6	6.9
Apr.–May	6.9	—	[3]	6.9	.6	.5	[3]	1.2	2.3	.5	2.8	.1	4.0	4.1
1981–2[1]	4.1	18.6	[3]	22.8	3.5	2.1	4.2	7.0	16.8	2.0	18.8			4.0
June–Sept.	4.1	18.6	[3]	22.8	1.2	.4	2.1	4.6	8.3	[3]	8.3	.1	14.4	14.5
Oct.–Dec.	14.5	—	[3]	14.5	.9	.5	1.9	2.0	5.3	1.4	6.7	.1	7.7	7.8
Jan.–Mar.	7.8	—	[3]	7.9	.9	.7	.2	.4	2.1	.1	2.2			5.7
Apr.–May	5.7	—	[3]											

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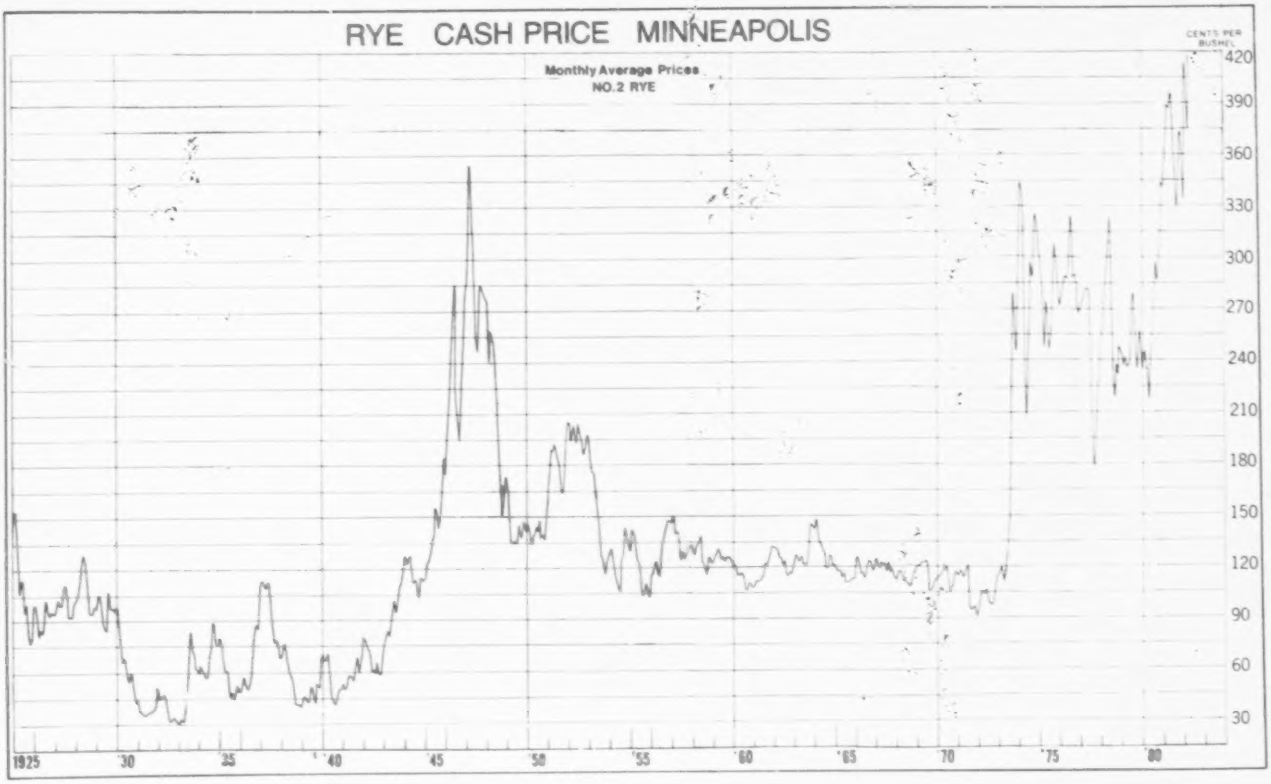
[1] Preliminary. [2] Residual. [3] Less than 50,000 bushels. *Source: Economics Service, U.S.D.A.*



Average Price of Cash Rye No. 2 at Minneapolis In Cents per Bushel

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Average
1969–0	115	104	106	110	112	114	113	114	117	115	117	117	113
1970–1	107	105	108	109	114	114	116	116	114	115	120	115	113
1971–2	100	92	95	96	91	99	103	105	104	104	106	99	100
1972–3	98	97	98	105	114	115	113	117	109	110	123	132	111
1973–4	160	217	279	265	246	286	344	338	316	221	209	257	262
1974–5	297	289	307	325	319	305	293	280	256	272	270	249	288
1975–6	258	304	303	301	286	273	282	281	289	288	296	324	284
1976–7	322	288	290	277	268	270	277	280	282	282	279	253	287
1977–8	194	179	206	228	246	256	269	282	294	305	322	293	253
1978–9	259	222	236	233	247	244	237	241	236	238	244	273	244
1979–0	279	247	235	257	249	235	245	235	235	218	244	266	247
1980–1	297	287	292	307	344	340	352	363	389	387	396	394	346
1981–2	352	330	356	371	374	334	394	414	375	426			
1982–3													

Source: Economic Research Service, U.S.D.A.

High, Low & Closing Prices of May Rye Futures in Winnipeg In Dollars per Tonne

Year of Delivery		Year Prior to Delivery							Delivery Year					Life of Delivery Range
		June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	
1978	High	—	—	91.50	99.00	112.20	117.00	119.00	113.50	112.80	114.80	118.00	109.00	119.00
	Low	—	—	82.30	90.00	96.80	105.90	109.50	107.50	104.50	107.90	103.30	98.50	82.30
	Close	—	—	89.90	97.20	111.20	111.00	114.50	108.00	107.90	113.00	105.50	108.50	—
1979	High	—	101.90	98.00	105.20	112.40	111.00	104.00	104.20	109.40	110.50	106.90	113.00	113.00
	Low	—	94.80	92.20	93.30	100.70	101.40	96.00	96.20	100.10	105.00	99.90	100.90	92.20
	Close	—	97.00	94.50	100.30	108.60	102.20	97.80	100.50	108.50	106.70	101.50	112.10	—
1980	High	154.00	188.00	167.50	189.40	191.00	181.00	175.00	192.50	195.00	205.50	196.50	195.50	205.50
	Low	117.50	148.50	139.50	159.40	171.50	170.50	160.80	163.50	182.00	176.00	173.80	168.50	117.50
	Close	143.50	158.00	159.40	184.00	181.50	172.10	169.40	183.00	186.00	187.60	178.50	195.50	—
1981	High	193.50	205.90	194.50	205.70	231.00	250.50	244.00	242.00	244.50	242.50	232.50	199.50	250.50
	Low	170.50	189.00	182.10	192.00	201.80	228.00	216.50	223.00	225.50	223.40	176.00	186.70	170.50
	Close	192.90	194.00	194.20	203.00	230.00	242.80	237.00	225.50	244.50	230.20	189.50	194.00	—
1982	High	167.00	181.50	215.90	233.50	218.00	195.60	187.00	185.20	187.30	171.00	178.00		
	Low	151.20	154.90	183.50	211.20	193.00	181.50	169.80	168.70	169.50	158.50	160.00		
	Close	151.20	181.50	215.90	217.70	194.20	183.40	171.00	182.00	169.50	160.30	170.00		
1983	High													
	Low													
	Close													

Source: Winnipeg Commodity Exchange

Month End Open Interest of Rye Futures in Winnipeg In 20 Tonne Units

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	2,062	2,242	2,428	2,600	2,306	2,414	2,757	2,969	2,646	2,951	2,598	2,206
1979	2,556	3,238	3,494	3,042	3,372	5,617	6,332	5,988	6,872	6,293	5,751	4,808
1980	4,648	5,028	5,379	6,172	3,313	5,229	5,348	4,839	5,814	6,106	4,250	3,428
1981	3,876	4,811	3,704	3,640	2,948	3,368	5,028	6,440	5,251	2,516	4,404	3,828
1982	3,739	3,622	3,219	3,583								

Source: Winnipeg Commodity Exchange

Rye Under Price Support Through the End of the Month (Cumulative Totals from Current Season's Crop) In Thousands of Bushels

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total
1969–0	—	1,422	3,486	4,469	4,718	4,920	5,903	6,085	6,293	6,415	6,418	6,419	6,417
1970–1	681	3,584	6,394	7,609	8,080	8,432	9,910	10,226	10,669	10,877	10,884	10,883	10,887
1971–2	323	5,828	11,156	13,332	14,357	15,035	17,175	17,779	18,442	18,930	18,949	18,955	18,960
1972–3	50	2,091	4,309	5,393	5,760	5,918	6,288	6,381	6,546	6,696	6,699	6,699	6,700
1973–4	44	253	331	367	407	427	442	442	442	442	442	442	450
1974–5	39	178	190	193	194	194	196	196	196	196	196	196	196
1975–6	8	59	59	63	64	85	87	87	87	87	87	87	87
1976–7	10	21	58	66	91	105	110	123	146	144	144	144	144
1977–8	74	250	647	719	769	800	858	887	917	914	913	913	913
1978–9	114	1,467	2,064	2,325	2,537	2,626	2,818	2,857	3,001	3,031	3,036	3,050	3,050
1979–0	5	338	765	1,106	1,313	1,397	1,592	1,653	1,790	1,882	1,900	1,905	1,905
1980–1	—	97	240	297	348	384	396	399	402	406	406	406	
1981–2	36		359	398	424	439	448	456	456				

Source: U.S. Department of Agriculture

Safflower Oil

Safflower Oil Supply & Distribution in the U.S. In Million Pounds

Crop Year Begin. Oct. 1	Supply			Distribution			Factory Consumption[2]							
	Stocks Oct. 1	Production	Total	Exports	Domestic Disapp.	Total	Salad & Cooking Oils	Margarine	Shortening	Other Edible	Paint & Varnish	Other Inedible	Loss	Total
1969	61	100	161	25	107	132	19	43	4.5	—	7.9	11.9	1.0	74.5
1970	19	120	149	20	100	120	12	22	1.2	4	8.3	7.1	.7	49.3
1971	29	140	169	40	90	130	11	19		3				
1972	39	150	189	40	118	158	22	20		2				
1973	31	100	131	25	98	123	29	32		1				
1974	8	115	123	25	75	100	17	16		10				
1975	25	100	125	25	75	100	22	7		—				
1976[1]	44	75	119	15	70	85	22	10		—				
1977[1]	25	119	120	25	74	99		8						
1978[1]	41	126	141	25	85	110		10						
1979[1]	31	139	131	25	75	100		5						
1980[1]		70												
1981[1]		68												

[1] Preliminary. [2] Data are for calendar year shown. *Sources: Bureau of Census; Economic Research Service, U.S.D.A.*

Safflower Oil Wholesale Price, Tanks, (Non-break) New York In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1969	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6
1970	15.6	15.6	16.3	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.3
1971	17.7	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.3
1972	18.4	18.4	18.4	18.4	18.4	18.4	18.7	19.6	19.6	19.6	19.6	19.6	18.9
1973	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6
1974	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	55.0	55.0	55.0	28.4
1975	65.5	69.0	69.0	69.0	69.0	69.0	69.0	69.0	69.0	52.8	47.0	52.0	64.1
1976	52.0	52.0	52.0	52.0	52.0	52.0	52.0	47.0	41.0	41.0	41.0	41.0	46.2
1977	41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.5
1978	41.0	41.0	41.0	41.0	41.0	41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.4
1979	41.0	41.0	41.5	41.5	41.5	41.5	41.5	—	—	—	—	—	41.3
1980	46.5	46.5	46.5	46.5	46.5	46.5	46.5	46.0	46.0	46.0	46.0	46.0	46.3
1981	46.0	46.0	46.0	46.0	46.5	46.5	46.5	46.5	72.5	72.5	72.5	72.5	55.0
1982	72.5	72.5	72.5										

Source: Economic Research Service, U.S.D.A.

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Salt

The amount of salt sold or used by U.S. producers in 1981 was about 2 percent less than in 1980, according to preliminary data of the U.S. Bureau of Mines. The chemical industry consumed about 61 percent of the total salt sold or used by producers. Most of the salt used by the chemicals sector was in the manufacture of chlorine and caustic soda. The demand for chlorine was expected to be weak throughout 1982. Salt used for highway de-icing accounted for about 16 percent of total domestic salt demand. Paper and food products, agriculture, water treatment, petroleum, metal production, and several other minor applications constituted the remaining end uses of salt.

There are no economic substitutes for salt.

World Production of All Salt In Thousands of Short Tons

Year	Brazil	Canada	China	France	W. Germany	India	Italy	Japan	Netherlands	Poland	Spain	United Kingdom	United States	U.S.S.R.	World Total
1971	1,628	5,542	18,200	6,057	9,834	5,986	5,042	1,043	3,491	3,262	2,181	10,344	44,077	13,200	159,107
1972	2,390	5,417	19,800	5,773	9,327	7,185	4,497	757	3,090	3,318	2,057	9,810	45,050	13,448	161,350
1973	2,044	5,565	22,000	7,023	11,245	7,566	5,370	1,119	3,355	3,393	2,421	9,390	43,940	13,450	170,483
1974	1,711	6,004	28,000	6,913	12,479	5,812	5,395	1,229	3,734	5,171	2,488	9,282	46,565	13,780	183,236
1975	2,365	5,330	33,000	6,104	10,269	5,353	4,863	1,115	2,965	3,885	3,453	8,410	41,057	15,100	178,207
1976	2,726	6,607	22,046	6,491	12,475	5,070	4,423	1,125	3,336	4,209	3,481	8,825	44,218	15,650	177,105
1977	2,735	6,657	18,850	6,367	13,583	5,877	5,545	1,164	3,429	4,803	2,683	9,041	43,439	15,760	177,349
1978	3,006	7,112	21,528	6,926	13,953	7,386	5,436	1,183	3,240	4,843	2,968	8,058	42,896	15,980	184,007
1979	3,087	7,585	16,281	8,882	16,633	7,756	6,249	1,202	4,355	4,882	2,951	8,619	45,820	15,760	189,436
1980[1]	3,300	7,748	19,048	7,830	14,300	8,005	5,806	1,200	3,818	3,700	3,090	7,260	40,379	15,980	181,608
1981[2]		7,800	20,000	7,800	14,500	8,000	5,900			3,600		7,300	39,500	16,000	180,500

[1] Preliminary. [2] Estimate. *Source: Bureau of Mines*

Salient Statistics of the Salt Industry in the United States In Thousands of Short Tons

		Sold or Used by Producers														
		Evaporated (Mfg.)					Rock Salt							Exports		
		Bulk														
Year	Net Import Reliance as a % of Apparent Consumption	Open Pans or Grainers	Vacuum Pans	Solar	Pressed Blocks	Total Evaporated	Bulk	Pressed Blocks	Total Salt Rock	Salt in Brine	Total Salt	Value[3] Million $	Imports for Consumption	Total	To Canada	Apparent Consumption
1971		335	3,289	1,937	367	5,928	13,613	87	13,700	24,449	44,077	303.7	3,855	670	398	47,262
1972		388	3,287	1,799	376	5,850	14,369	66	14,434	24,737	45,022	296.8	3,463	869	627	47,616
1973		525	2,984	1,924	451	5,884	12,275	72	12,347	25,680	43,910	306.1	3,207	609	561	46,508
1974		540	3,032	1,910	440	5,922	14,753	82	14,835	25,779	46,536	360.8	3,358	521	464	49,373
1975	4	526	2,801	1,583	436	5,345	14,200	84	14,283	21,401	41,030	368.1	3.215	1,332	1,315	42,913
1976	7	536	2,908	1,752	412	5,607	15,592	76	15,668	22,917	44,191	431.0	4,352	1,007	958	47,536
1977	8	—3,481—		1,808	388	5,677	14,893	65	14,958	22,777	43,412	451.6	4,529	1,008	963	46,933
1978	10	—3,463—		2,001	381	5,845	14,630	58	14,688	22,336	42,869	499.3	5,380	776	750	47,473
1979	10	—3,726—		2,104	391	6,221	14,827	64	14,891	24,681	45,793	538.4	5,275	697	681	50,371
1980[1]	7	—3,587—		2,334	393	6,314	11,742	65	11,806	22,231	40,352	656.2	5,263	831	800	44,784
1981[2]	9										39,500		5,300	1,200		43,600

[1] Preliminary. [2] Estimate. [3] Values are f.o.b. mine or refinery & do not include cost of cooperage or containers.
Source: Bureau of Mines

Salt Sold or Used by Producers in the U.S. by Classes & Consumers or Uses In Thousands of Short Tons

Year	Chlorine Caustic Soda, Ash	Flour Processors	Textile & Dyeing	Meat Packers, Tanners, Etc.[2]	Canning	Baking	U.S. Govt.	Feed Dealers	Feed Mixers	Rubber	Oil	Paper & Pulp	Metals	Water Softener Mfg.[3]	Grocery Stores	Flour Proc.	Highway Use
1971	25,979		193	653	241	116		1,355	586	172	164	279	182	680	1,236		7,905
1972	26,517		207	619	228	117		1,386	577	173	202	201	227	698	1,258		9,255
1973	27,374		201	577	238	122	102	1,370	713	166	215	209	228	687	1,292	85	6,079
1974	27,643		205	591	241	118	90	1,512	471	157	242	165	252	835	1,252	85	7,757
1975	23,444	101	180	579	259	125	119	1,310	552	127	261	172	265	586	991	101	7,680
1976	25,008	98	204	578	257	126	74	1,332	593	108	312	213	342	580	998	98	8,930
1977	24,142	95	196	569	255	112	72	1,269	556	125	361	222	351	650	1,043	95	8,678
1978	23,735	91	182	540	254	111	86	1,197	654	96	451	221	346	764	1,057	91	8,487
1979	26,200	95	188	546	280	119	78	1,194	723	99	550	194	356	810	1,140	95	8,742
1980[1]	23,941	92	177	546	287	113	121	1,172	662	95	709	230	272	686	995	92	6,389

[1] Preliminary. [2] Also casing mfg. [3] Also service companies. *Source: Bureau of Mines*

Sheep and Lambs

The U.S. sheep and lamb inventory on January 1, 1982, totaled 13.1 million head, up 1 percent over a year ago. This was the third consecutive yearly increase after many years of decline. Inventories of stock sheep, ewes, and ewe lambs were up 2 percent. The 1981 lamb crop, 8.85 million head, was 7 percent higher than the previous year's crop. The 1981 lambing rate was 101 per 100 ewes, that were one-year-old and older, compared with 97 in 1980 and 95 in 1979. The lambing rate reflected the mild winter and favorable range and forage conditions.

Cost of production studies indicated positive returns per ewe above direct cash costs in 1980 and 1981. In 1982, positive returns were also expected, because lower feed costs could keep cash costs about the same as in 1981. The favorable returns were expected to provide a limited incentive for expanding production in 1982.

In early 1982, the sheep and lamb industry was characterized by an expanding inventory, plentiful supplies, low prices, large competing meat supplies, and uncertain economic conditions. However, large grain crops resulted in lower feed costs, which were holding overall production costs near last year's level.

The average price for sheep in 1981 was $21.20 per 100 pounds, live weight, nearly the same as in 1980. Lamb prices in 1981 dropped $8.70 to $54.90 per 100 pounds.

World Sheep Numbers in Specified Countries In Millions of Head

Year	India	Argentina	Australia	Brazil	Peru	Iran	New Zealand	Spain[2]	Turkey	United Kingdom	United States	South Africa	Uruguay	U.S.S.R.	China[4]	World[5]
1969		44.3	174.6	24.6	15.0	34.0	59.9	19.0	36.6	19.7	21.4	40.4	19.9	140.6	70.3	1,062
1970		42.5	180.1	25.7	17.1	32.0	60.3	18.7	36.4	19.2	20.4	34.1	19.8	130.7	70.6	1,040
1971		39.0	177.8	25.0	16.9	32.0	58.9	18.4	36.5	18.5	19.7	31.6	18.5	138.1	71.0	1,038
1972	1972–	40.0	162.9	25.5	12.5	32.0	60.9	17.9	36.8	18.7	18.7	30.2	16.3	139.9	71.3	1,022
1973	76	41.0	140.0	26.0	13.0	34.0	56.7	17.2	38.8	19.6	17.7	33.3	17.0	139.1	71.6	1,009
1974	Avg.	41.0	145.2	26.5	13.5	35.0	55.9	16.3	40.1	20.2	16.4	33.6	15.1	142.6	71.9	1,022
1975	(40.0)	38.5	151.7	25.0	15.3	36.5	55.3	16.3	40.5	20.2	14.5	31.6	14.9	145.3		
1976		35.0	148.6	17.3	15.0	33.5	56.4	15.7	41.4	19.5	13.3	31.8	15.7	141.4		718
1977	40.4	35.2	135.4	17.2	14.5	33.0	59.1	14.5	41.5	19.9	12.8	32.6	16.6	139.8		690
1978	40.7	34.2	131.4	17.2	14.0	33.0	62.2	14.5	42.7	20.5	12.4	32.6	18.9	141.0		695
1979	41.0	32.8	134.2	17.8	14.0	32.5	63.5	13.8	43.9	21.7	12.4	32.5	20.7	142.6		708
1980	41.0	32.0	136.0	18.0	13.5	32.0	68.7	14.2	46.0	21.7	12.7	32.6	23.3	143.6		722
1981[1]	41.5	30.0	132.4	18.0	13.5		71.5	14.0	47.5	21.7	12.9	32.6	24.0	141.6	187.0	722
1982[3]	42.0	30.0	134.0	18.0	13.0		72.0	14.1	48.0	22.5	13.1		22.7	141.3		724
1983																

[1] Preliminary. [2] One year old & older. [3] Estimate. [4] Mainland. [5] Total of selected countries from 1976 to date.
Source: Foreign Agricultural Service, U.S.D.A.

Salient Statistics of Sheep & Lambs in the United States

Year	On Hand Jan. 1	Lambs Saved	In Shipments	Marketings[2]	Slaughter		Production	Marketings[2]	Value of Production	Cash Receipts[3]	Value of Home Consumption	Gross Income	Farm Value (1/1)	
					Farm	Total[4]							All	$ per Head
	Mil. Head		Ths. Head				Mil. Lbs.		Millions of Dollars					
1969	21.4	13.7	4,119	15,155	233	10,924	1,065	1,447	266.9	343.4	5.6	349.0	470.7	22.00
1970	20.4	13.5	4,032	14,823	249	10,801	1,099	1,438	260.4	333.7	5.7	339.4	512.7	25.10
1971	19.7	13.0	4,004	14,829	236	10,965	1,071	1,432	250.2	323.0	5.4	328.4	465.4	23.60
1972	18.7	12.6	3,976	14,553	224	10,525	1,004	1,396	271.4	353.8	5.7	359.5	428.9	22.90
1973	17.7	11.5	3,275	13,077	302	9,799	896	1,277	293.7	389.6	6.9	396.5	470.8	26.70
1974	16.4	10.5	2,629	12,060	217	9,064	807	1,185	272.0	368.7	7.9	376.6	534.8	32.80
1975	14.5	9.9	2,349	10,851	212	8,047	785	1,059	303.3	385.8	8.5	394.3	442.5	30.50
1976	13.3	8.9	2,469	9,615	202	6,911	733		315.6	393.1	9.2	402.3	496.3	37.30
1977	12.8	8.6	2,148	8,811	198	6,555	706		320.3	386.4	9.9	396.2	540.2	42.50
1978	12.3	7.9	2,148	7,968	174	5,543	688		381.6	452.9	11.2	464.2	641.5	51.60
1979	12.4	8.0	2,136	7,678	172	5,189	709		410.1	474.2	11.7	485.9	891.0	72.10
1980[1]	12.7	8.3	2,170	8,088	163	5,579	745		401.8	468.4	11.4	479.7	992.1	78.20
1981[1]	12.9	8.9				6,007							903.3	69.80
1982[1]	13.1												746.5	56.90

[1] Preliminary. [2] Excludes interfarm sales. [3] Includes receipts from marketings & from sales of farm slaughter meats. [4] Includes all commercial & farm. *Source: Crop Reporting Board, U.S.D.A.*

Sheep and Lambs on Farms in the United States, January 1 In Thousands of Head

Year	All Sheep and Lambs[2]														Total[1] Stock
	Minnesota	California	Colorado	Idaho	Missouri	Montana	New Mexico	Ohio	South Dakota	Texas	Utah	Wyoming	Iowa	Total[2]	
1969	576	1,356	1,337	852	306	1,225	840	744	1,240	4,029	1,053	1,860	942	21,350	18,332
1970	554	1,317	1,263	785	288	1,180	834	728	1,155	3,708	1,053	1,853	869	20,423	17,411
1971	504	1,264	1,274	828	251	1,067	742	687	1,201	3,789	1,009	1,829	765	19,731	16,946
1972	467	1,113	1,220	728	230	1,000	714	672	1,181	3,524	976	1,735	735	18,739	15,835
1973	445	1,071	1,204	707	215	955	743	623	1,161	3,214	905	1,678	660	17,641	14,852
1974	415	1,132	1,140	684	224	794	672	582	976	3,090	772	1,505	531	16,310	13,744
1975	390	1,070	990	595	194	770	575	517	792	2,688	697	1,350	460	14,515	12,436
1976	315	1,052	920	536	168	635	590	500	686	2,600	590	1,265	385	13,311	11,427
1977	275	1,113	830	503	134	570	560	445	659	2,520	580	1,206	388	12,766	11,035
1978	255	1,115	810	536	131	530	571	370	704	2,460	491	1,115	370	12,348	10,725
1979	255	1,150	795	466	126	475	604	350	740	2,415	486	1,080	380	12,365	10,786
1980	264	1,175	870	468	123	574	660	320	783	2,400	625	1,050	408	12,687	11,065
1981	295	1,205	810	512	138	595	650	310	780	2,360	650	1,110	437	12,936	11,287
1982[3]	335	1,210	710	498	133	616	615	313	780	2,500	636	1,130	485	13,116	11,552
1983															

[1] Stock sheep & lambs; does not include sheep & lambs on feed for market. [2] Includes sheep & lambs on feed for market and stock sheep & lambs. [3] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

Average Wholesale Price of Lambs at Omaha In Dollars Per 100 Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1969	27.25	27.38	28.25	29.25	30.88	30.38	29.25	28.62	27.75	28.38	27.50	27.50	28.53
1970	28.88	28.75	28.75	26.00	29.00	29.50	28.38	27.12	26.75	26.75	25.38	23.88	27.43
1971	24.00	25.12	26.88	30.25	31.12	31.25	28.88	27.75	27.50	25.88	24.75	25.75	27.43
1972	27.88	28.38	29.38	31.00	33.75	34.00	32.88	31.25	30.00	26.75	27.00	29.25	30.13
1973	33.62	39.25	40.75	34.25	36.25	38.00	39.25	41.50	33.38	31.75	34.75	37.50	36.69
1974	38.38	40.00	37.50	39.50	47.25	46.25	41.25	39.00	36.12	35.88	37.50	38.50	39.76
1975	37.50	40.50	43.00	47.88	50.75	46.12	45.00	41.00	44.12	44.00	45.00	48.13	44.42
1976	49.33	47.75	53.50	60.75	63.88	50.50	45.75	38.88	40.00	39.75	39.00	45.00	47.84
1977	49.00	50.25	51.50	56.75	56.25	53.00	50.75	51.87	55.75	56.88	50.00	58.50	53.38
1978	64.00	68.00	69.38	64.80	71.00	59.50	60.00	59.25	62.50	60.00	59.50	64.00	63.49
1979[1]	73.75	71.25	61.25	70.50	70.75	65.00	61.52	60.62	67.01	65.91	65.00	67.75	66.58
1980[1]	66.00	63.00	61.38	59.50	62.75	64.00	67.50	68.25	65.75	62.00	55.67	53.13	59.81
1981[1]	46.50	54.50	55.25	59.25	65.00	66.25	59.00	53.75	50.25	51.00	46.00	46.50	54.44
1982[1]	49.75	51.50											
1983													

[1] Preliminary. *Source: Economic Research Service, U.S.D.A.*

Federally Inspected Slaughter of Sheep & Lambs in the United States In Thousands of Head

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1969	1,007	769	815	829	835	810	822	797	915	913	730	798	10,070
1970	855	742	859	903	795	841	829	789	897	917	735	847	10,009
1971	903	806	920	899	772	827	815	812	919	919	818	846	10,256
1972	847	801	903	786	803	807	737	840	866	937	828	751	9,905
1973	835	700	710	690	858	727	807	844	789	915	747	612	9,234
1974	749	612	772	782	670	581	713	777	842	851	612	595	8,556
1975	663	570	648	627	616	614	635	621	758	701	515	584	7,552
1976	582	513	570	561	429	502	525	563	622	556	517	534	6,474
1977	498	461	579	539	474	550	468	553	568	525	477	441	6,133
1978	425	390	487	430	451	441	406	438	435	457	413	396	5,169
1979	391	354	431	425	421	371	384	415	410	455	386	389	4,833
1980	448	419	470	466	454	400	420	427	466	510	415	468	5,363
1981	489	426	489	512	425	440	439	467	546	558	476	522	5,789
1982	510	490	570										
1983													

Source: Economic Research Service, U.S.D.A.

SHEEP AND LAMBS

Cold Storage Holdings of Lamb and Mutton, on 1st of Month In Thousands of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1969	14,139	10,417	9,479	12,201	16,906	15,758	12,946	12,456	15,215	16,022	17,037	17,343
1970	16,134	17,074	18,064	21,794	20,919	18,808	20,032	23,093	22,834	20,738	21,028	19,653
1971	19,336	20,526	19,653	20,403	20,221	22,506	22,848	21,292	19,391	20,719	20,059	18,626
1972	19,260	16,355	12,836	12,238	15,205	19,916	19,277	21,272	21,220	19,171	18,226	17,200
1973	15,704	14,258	11,847	10,920	13,210	15,644	16,004	14,451	12,739	13,083	15,517	14,691
1974	15,034	12,465	13,018	13,749	14,149	16,820	15,909	15,977	15,333	14,198	14,894	14,169
1975	13,690	12,154	11,221	9,254	9,963	8,819	7,388	9,089	10,107	10,749	10,765	11,543
1976	11,785	10,808	11,123	9,244	9,626	10,935	12,261	14,461	15,152	16,958	15,678	16,552
1977	14,535	14,131	13,884	11,813	12,771	14,583	14,381	13,848	13,567	11,630	10,097	9,356
1978	10,096	9,261	8,628	7,947	9,176	10,149	10,011	11,891	11,259	11,323	12,200	11,804
1979	11,716	10,965	10,827	12,022	12,072	12,897	11,483	11,943	11,763	10,951	11,697	11,071
1980	10,751	10,302	9,464	7,945	8,475	8,995	10,229	10,263	8,880	8,336	8,165	9,779
1981[1]	9,142	8,997	7,843	7,823	10,196	10,403	12,297	12,564	13,694	13,311	12,676	11,362
1982[1]	10,540	9,569	8,449	8,638								
1983												

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

Average Price Received by Farmers for Sheep in the U.S. In Dollars per 100 Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average[1]
1969	7.18	7.63	8.24	8.73	8.34	8.07	8.24	8.53	8.39	8.35	8.15	9.05	8.24
1970	7.95	8.22	8.45	8.11	8.07	8.04	7.99	7.43	7.16	7.09	6.97	6.67	7.68
1971	6.90	7.03	7.34	7.08	6.87	6.50	6.23	6.78	6.39	6.05	6.13	6.22	6.63
1972	6.17	6.69	7.12	6.74	7.08	6.92	7.08	7.32	7.33	7.31	7.78	8.35	7.16
1973	9.36	10.80	12.10	12.10	11.40	12.00	12.40	15.70	13.50	13.30	13.00	14.20	12.50
1974	14.70	15.80	15.10	13.60	12.20	10.60	10.50	10.90	9.80	8.20	8.10	8.90	11.50
1975	9.85	10.30	10.60	11.70	11.60	11.30	11.80	10.80	11.30	10.80	10.80	11.80	11.10
1976	12.60	12.80	13.90	15.30	14.70	12.80	13.40	12.90	12.90	11.90	11.50	13.00	13.10
1977	13.80	13.90	15.40	14.40	13.00	12.00	12.30	12.40	13.40	13.20	14.10	14.60	13.50
1978	16.50	18.40	19.70	19.50	19.20	19.30	19.40	20.80	24.40	24.90	24.70	25.50	21.00
1979	26.20	26.30	28.10	31.00	27.90	24.00	25.10	24.30	26.50	27.20	26.30	25.00	26.50
1980[2]	27.40	30.50	26.90	21.90	21.70	20.30	17.80	19.40	21.40	18.90	19.90	20.80	22.20
1981[2]	27.40	29.00	26.10	23.40	19.50	20.30	23.00	20.40	20.30	19.70	19.10	19.20	21.20
1982[2]	25.10	21.30	27.20	23.00									
1983													

[1] Weighted average by quantities sold. [2] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

Average Price Received by Farmers for Lambs in the U.S. In Dollars per 100 Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average[1]
1969	25.20	26.70	27.40	28.00	28.00	27.70	28.00	27.30	26.90	27.60	27.30	27.20	27.30
1970	28.10	27.90	27.50	26.30	26.80	27.20	27.00	26.70	26.20	26.10	25.20	23.40	26.50
1971	23.10	23.90	25.50	26.70	27.10	28.10	27.10	27.40	25.90	25.40	25.20	25.40	25.90
1972	26.90	28.20	28.70	28.60	30.40	30.70	31.40	30.20	29.10	28.20	27.60	28.70	29.10
1973	32.60	35.30	39.20	35.10	33.60	36.20	35.40	41.80	33.10	32.50	33.80	35.40	35.30
1974	39.30	39.20	36.00	37.40	41.20	42.70	37.90	37.50	33.20	33.20	35.20	36.10	37.40
1975	36.80	37.90	39.80	43.00	45.70	44.80	43.10	39.90	40.50	42.60	44.20	46.30	42.10
1976	47.90	47.20	50.20	54.90	60.10	51.10	46.80	41.50	41.80	42.60	41.90	44.70	47.60
1977	48.30	49.60	49.10	50.80	55.00	50.90	50.60	49.10	51.30	52.60	52.40	56.90	51.40
1978	60.70	63.20	67.10	63.90	66.50	61.80	58.80	58.50	63.70	62.50	61.40	65.70	62.80
1979	74.10	69.90	64.90	70.40	69.70	66.40	64.00	61.40	66.70	65.70	64.90	66.90	67.10
1980[2]	66.40	64.40	67.10	59.20	60.30	64.60	65.30	65.80	66.70	64.30	59.90	58.40	63.50
1981[2]	54.10	55.40	56.50	58.80	63.10	65.00	59.50	56.20	50.40	50.60	47.40	47.50	54.90
1982[2]	50.40	53.30	60.30	60.60									
1983													

[1] Weighted average by quantities sold. [2] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

Silk

Salient Statistics of Silk in the United States

Year	World Production (Raw) Million Lbs.	U.S. Unmanufactured[1] Imports[2] (By Country of Origin) Total Imports	Brazil	United Kingdom	France	India	Italy	Japan	Switzerland	China	Korea	U.S. Silk Imports[2] Raw	Waste	Mill Consumption Total Mil. Pounds	Per Capita Pounds
		Thousands of Pounds										Mil. Lbs.			
1969	86	3,385	135	66	—	—	1,265	1,124	—	—	761	1.9	1.5	3.3	.10
1970	90	1,846	141	2	—	—	911	416	—	—	355	.8	.9	1.8	.10
1971	90	1,702	38	—	—	—	345	1,154	—	—	74	.3	1.4	1.7	.10
1972	93	2,139	76	—	—	—	227	1,339	—	—	106	.6	1.6	2.1	—
1973	95	3,342	79	13	—	—	472	2,197	—	—	15	.6	2.8	3.3	—
1974	99	2,593	145	0	—	—	397	1,476	—	—	107	.4	2.2	2.6	—
1975	104	968	176	1	—	—	0	386	—	353	0	.6	.4	1.0	—
1976	106	2,653	247	1	—	—	98	1,727	—	457	—	.7	1.9	2.8	—
1977	108	1,621	106	0	—	—	0	1,230	—	268	0	.4	1.2	1.6	—
1978	112	1,989	182	0	—	107	1	918	—	607	119	.7	1.3	2.0	—
1979	121	1,565	193	—	—	—	—	602	—	747	—	.8	.8	1.5	—
1980[3]	123	1,053	139	—	—	—	—	108	—	913	71	.5	.6	1.5	—
1981[4]														2.0	—

[1] In skeins, wild or tussah, cocoons, and waste. [2] Imports for consumption. [3] Preliminary. [4] Estimate.
Source: Department of Commerce; Textile Organon

Raw Silk Deliveries in the U.S. In Bales (132 Lbs.—60 Kilos)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1969	806	1,123	1,843	1,390	1,500	1,646	1,663	943	1,483	1,507	1,296	1,194	16,394
1970	1,209	882	1,046	931	730	406	458	34[illegible]	390	310	232	141	7,079
1971	247	205	187	277	228	129	192	241	247	355	165	253	2,726
1972	233	184	308	198	141	195	182	445	529	209	229	313	3,166
1973[1]	556	355	450	499	393	119	577	214	71	93	105	246	3,678
1974	124	305	233	277	175	288	269	139	97	302	151	96	2,456
1975	190	188	410	393	394	219	380	219	505	585	225	641	4,349
1976	925	469	689	362	251	579	337	358	422	268	222	159	5,041
1977	352	239	242	212	254	259	322	311	370	424	322	433	3,740
1978	321	394	424	382	397	299	316	341	401	280	468	214	4,237
1979	501	302	687	353	471	418	407	756	492	490	368	518	5,763
1980	312	644	422	507	366	285	257	332	342	365	265	323	4,420
1981	471	380	471	446	322	529	300	259	348	414	487	611	5,038
1982													

[1] Includes re-exports from 1973. *Source: International Silk Association*

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Silver

World mine production of silver in 1981 was about 4.5 percent above 1980 output, according to preliminary data of the U.S. Bureau of Mines. U.S. mine production of recoverable silver in 1981 was 20 percent above the 1980 level. Byproduct silver recovery increased as output of silver-bearing copper ores returned to more normal levels at the end of the copper industry strike in 1980. And, U.S. production from silver ores increased sharply as the strike ended at the Sunshine Mine, one of the nation's largest silver mines. The Bunker Hill Co., in late 1981, planned to close its mine-smelter-refinery complex at Kellogg, Idaho by mid-1982. This was expected to adversely affect smelting and refining capacity.

U.S. refinery production of silver in 1981 was about 17 percent lower than in 1980. Production from foreign and domestic concentrates and ores was up 19 percent, but output from old scrap was off 31 percent from the 1980 level, primarily because of a sharp drop in production from coins. Production of silver from new scrap was 38 percent lower than in 1980.

U.S. imports of silver for consumption in 1981, mostly bullion, increased over 19 percent from 1980 imports. Canada accounted for the largest share of U.S. imports of silver, followed by Peru and Mexico. Exports of silver decreased by more than 9 percent in 1981. Canada, the U.K., and Japan accounted for the bulk of silver exported from the U.S. in 1981.

Net U.S. industrial consumption of silver in 1981 was 6.6 percent above the depressed level of 1980, according to the U.S. Bureau of Mines. The use of silver in photographic materials registered a 6.5 percent gain in 1981, and its use in contacts and conductors was up 12.5 percent. Silver's use in sterling ware dropped a sharp 36 percent, continuing a trend which began when prices increased sharply in 1979. Coins, medallions and commemorative objects used 29 percent less silver in 1981 than in 1980. Coinage accounted for 0.179 million ounces of silver in 1981 versus 0.072 million in the preceding year. End-use categories of net industrial consumption in the U.S. approximated the following: photographic materials—40 percent; contacts and conductors—23.8 percent; brazing alloys and solders—7.3 percent; jewelry—5.0 percent; sterling ware—4.3 percent; electroplated ware—4.2 percent; catalysts—4.0 percent; batteries—3.8 percent; coins, medallions and commemorative objects—2.5 percent; dental and medical—1.5 percent; misc.—3.9 percent.

Industry stocks of silver (held by refiners, fabricators, and dealers) on December 31, 1981 totaled about 20.7 million ounces, up from 17.0 million at the end of 1980. COMEX licensed warehouse stocks of silver were 86.9 million ounces versus 77.6 million a year earlier, and Chicago Board of Trade licensed warehouse stocks totaled 18.9 million ounces, down from 34.1 million at the end of 1980. The U.S. strategic stockpile held about 137.5 million ounces of silver at the end of 1981 vs. 139.5 million a year earlier.

Public Law 97–35, enacted August 31, 1981, authorized the sale of 105.119 million ounces of surplus stockpile silver by the General Services Administration (GSA) over a three year period. The disposal of 46.537 million ounces of silver was authorized in fiscal year (FY) 1982; 44.687 million in FY 1983, and 13.9 million in FY 1984. On September 17, 1981, the GSA announced it would offer 1.25 million ounces of silver weekly beginning October 14, 1981. But, after the sale of only 2.0 million ounces, the GSA announced on December 17 that it would stop sales in accordance with the Defense Appropriations Act. This act called for a halt to such sales while a study was to be made of national stockpile needs.

U.S. (N.Y.) silver prices, as quoted by Handy & Harman, trended lower in 1981, from a peak of $16.45 per troy ounce on January 6 to a 1981 low of $7.95 on December 29, interrupted only by a midsummer rally. The U.S. average silver price in 1981 of $10.52 was 49 percent below the 1980 average of $20.63. The London (daily fixing) high for 1981 was 671.200 pence per ounce, the low was 412.800 pence, and the average price was 515.234 pence.

Reduced inflationary expectations, the sluggish economy, continued high interest rates, the U.S. Government's plans to sell silver from the strategic stockpile, and new tax laws regarding futures straddles contributed to the lower price trend in 1981.

Futures Markets

Silver futures are traded on the Commodity Exchange, Inc. (COMEX) in New York; the Chicago Board of Trade and the MidAmerica Commodity Exchange in Chicago. Trading in silver futures is also conducted on the London Metal Exchange (LME) and on the Winnipeg Commodity Exchange.

World Production of Silver, by Selected Countries In Millions of Fine Ounces (Troy Ounces)

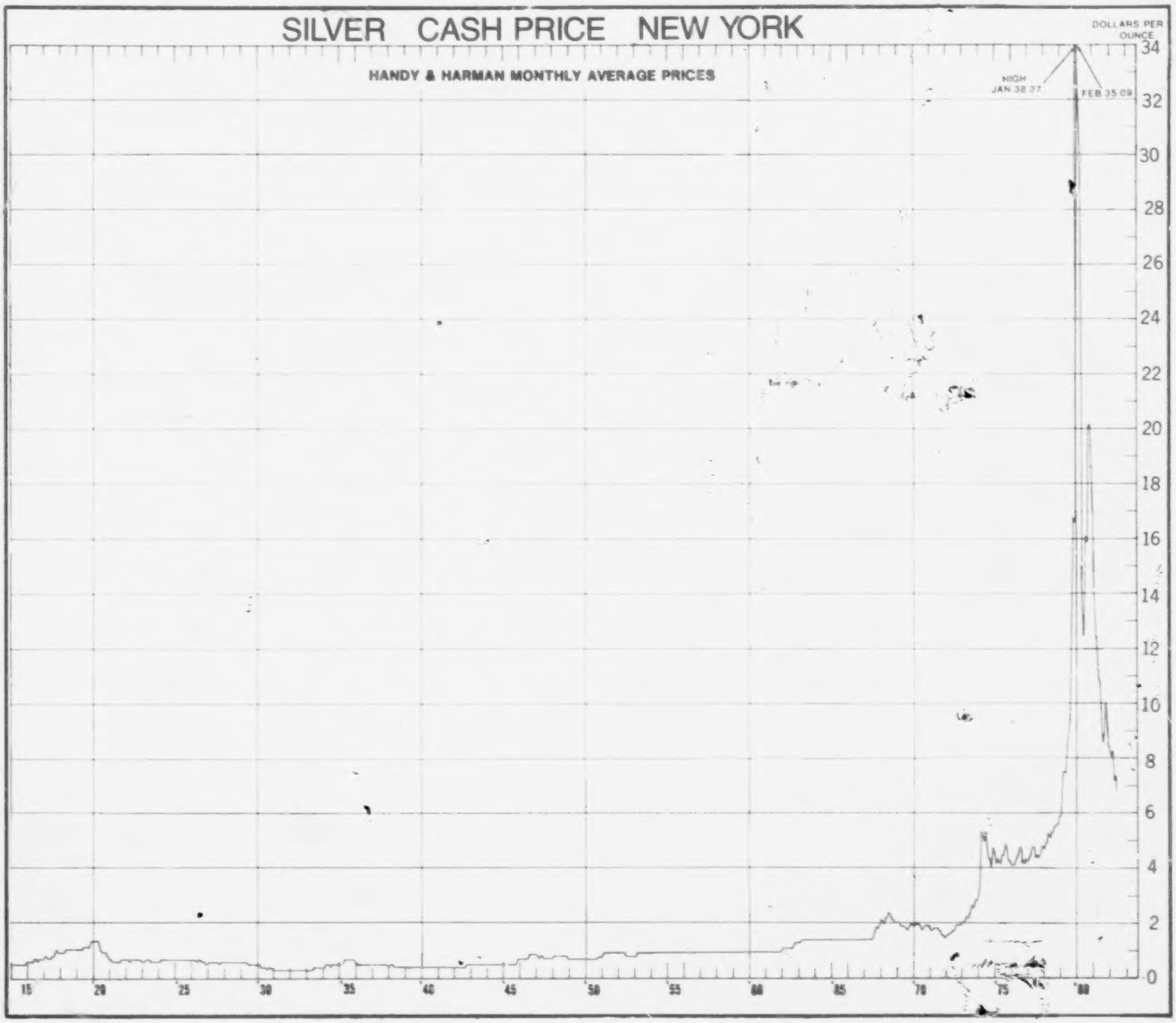
Year	Poland	Argentina	Australia	Zaire (Congo)	Bolivia[1]	Canada	Morocco	W. Germany	Honduras	USSR[2]	Japan	Mexico	Peru	United States	Yugoslavia	World Total[3]
1971		3.18	21.70	1.47	5.37	46.02	2.94	1.80	3.64	39.0	11.29	36.66	38.40	41.56	3.35	294.7
1972		3.27	21.89	2.08	5.58	44.79	3.38	1.74	3.60	40.0	10.05	37.48	40.19	37.23	3.58	301.5
1973		2.44	22.42	2.00	5.80	47.49	3.38	1.45	3.15	41.0	8.55	38.79	42.02	37.83	4.30	307.9
1974	5.8	3.10	21.54	1.65	5.39	42.81	3.06	1.24	3.66	42.0	7.31	37.55	34.89	33.76	4.70	292.2
1975	13.2	2.28	23.35	2.29	5.47	39.70	3.04	1.08	3.80	43.0	8.73	38.03	37.53	34.94	5.41	303.0
1976	17.8	2.25	25.03	2.47	5.34	41.20	2.05	1.03	3.18	44.0	9.30	42.64	35.58	34.33	4.63	316.4
1977	20.7	2.45	27.53	2.73	5.81	42.24	2.24	1.06	2.82	45.0	9.60	47.03	39.09	38.17	4.68	340.3
1978	21.9	2.04	26.12	4.39	6.29	40.73	2.32	.80	2.79	46.0	9.66	50.78	37.05	39.39	5.12	344.4
1979	22.6	2.19	26.82	3.89	5.74	36.87	2.42	1.04	2.43	46.0	8.68	49.31	43.42	38.09	5.21	346.0
1980[3]	23.1	2.20	24.71	4.00	6.10	33.34	2.30	1.00	2.70	46.0	8.93	49.41	47.90	32.1	4.79	342.2
1981[2]						38.0						50.0	48.0	37.5		357.5

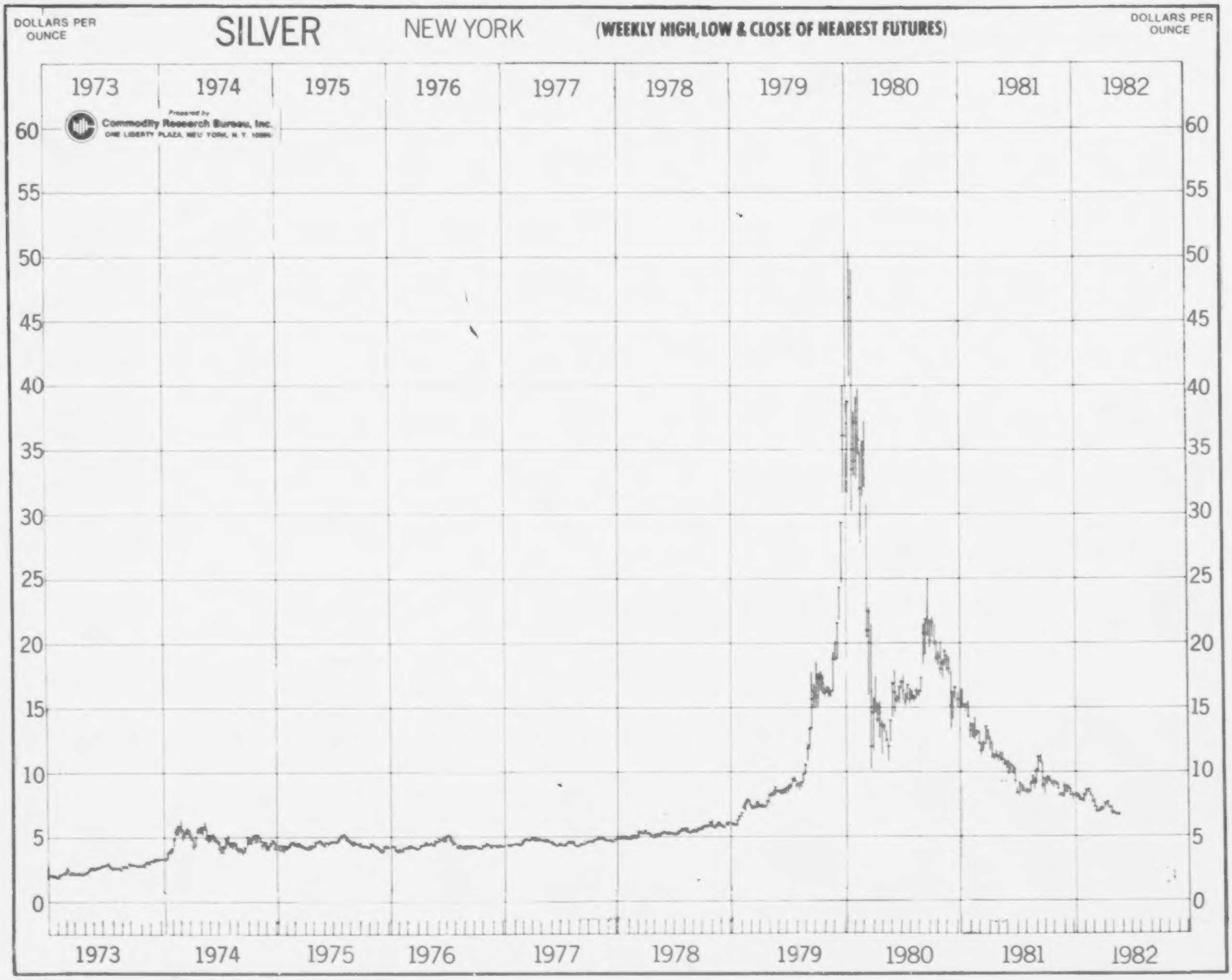
[1] Exports. [2] Estimate. [3] Preliminary. *Source: Bureau of Mines*

Average Price of Silver in New York In Cents per Troy Ounce (.999 Fine)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1969	197.9	184.0	182.6	177.8	176.1	164.6	161.8	165.3	178.6	187.3	192.3	180.7	179.1
1970	187.7	189.6	188.9	185.3	167.0	163.9	168.7	179.8	180.2	174.6	176.0	163.5	177.1
1971	164.0	160.0	166.9	172.6	166.7	160.8	158.1	158.7	142.1	133.6	132.0	139.4	154.6
1972	147.3	150.4	153.6	157.2	158.3	156.9	173.6	184.6	177.7	181.1	183.3	197.6	168.5
1973	201.7	223.6	230.9	220.7	240.1	262.1	270.6	263.7	267.5	288.6	286.0	313.7	256.0
1974	363.7	535.9	532.6	503.6	543.2	489.6	441.6	443.1	404.9	483.0	469.4	439.1	470.8
1975	419.3	437.0	434.5	420.9	453.8	448.9	470.5	492.5	451.6	432.9	433.2	408.5	442.0
1976	406.3	408.6	418.9	435.1	448.9	481.2	478.0	423.7	429.5	422.5	437.3	434.7	435.4
1977	440.9	452.7	484.2	477.7	469.2	444.3	449.8	444.4	453.9	476.3	482.8	470.6	462.3
1978	493.4	493.6	526.8	511.6	512.0	531.6	533.1	549.5	557.5	591.8	586.5	593.0	540.0
1979	625.5	741.7	745.4	749.3	836.6	853.8	913.5	933.4	1,395.9	1,678.1	1,655.3	2,179.3	1,109.0
1980	3,827.2	3,508.5	2,413.3	1,384.1	1,253.3	1,574.8	1,606.0	1,589.7	2,014.4	2,018.1	1,864.8	1,639.3	2,063.3
1981	1,475.2	1,306.5	1,236.9	1,091.7	1,084.8	1,000.1	863.1	892.3	1,003.6	925.1	854.7	843.2	1,048.1
1982	803.1	826.8	721.3	731.1									
1983													

Source: Handy & Harman





Highest and Lowest Prices of December Silver Futures at New York (Comex) In Dollars per Ounce

Year of Delivery		Yr. Prior to Delivery			Delivery Year												Life of Delivery Range
		Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
1978	High	5.292	5.377	5.166	5.425	5.43	5.877	5.752	5.668	5.718	5.823	5.863	5.795	6.40	6.11	6.02	6.400
	Low	5.022	5.01	4.95	5.16	5.135	5.25	5.10	5.174	5.392	5.325	5.43	5.506	5.71	5.645	5.80	4.715
	Close	5.251	5.134	5.143	5.33	5.29	5.775	5.219	5.621	5.40	5.817	5.597	5.715	6.215	6.00	5.986	—
1979	High	6.94	6.558	6.538	7.16	8.405	8.23	8.363	9.36	9.235	9.975	10.935	16.90	18.13	19.40	25.75	25.750
	Low	6.296	6.205	6.26	6.36	6.99	7.453	7.625	8.31	8.64	8.842	8.985	11.15	15.91	15.85	18.65	5.585
	Close	6.758	6.465	6.514	7.089	8.14	7.839	8.363	9.091	8.96	9.293	10.86	16.80	16.79	18.82	25.50	—
1980	High	19.55	20.528	30.91	44.37	42.15	39.78	20.27	14.75	20.20	20.09	17.14	24.18	22.28	20.32	19.02	44.370
	Low	16.79	17.54	20.705	31.91	35.20	21.27	13.86	11.45	16.975	17.57	15.90	16.67	18.54	17.58	13.37	7.564
	Close	18.395	20.528	30.91	37.645	38.64	21.27	13.86	14.53	19.24	17.84	16.84	21.25	19.10	18.59	16.61	—
1981	High	26.00	23.525	22.615	18.80	15.90	14.67	13.58	12.70	11.84	9.78	10.26	11.80	10.05	9.41	9.05	43.750
	Low	22.12	20.875	17.19	14.60	13.75	12.80	11.90	11.21	9.08	8.77	8.73	8.49	9.00	7.87	7.98	7.970
	Close	22.54	22.015	18.19	15.165	13.72	13.135	12.205	11.685	9.18	9.032	9.72	9.38	9.25	8.205	7.985	—
1982	High	11.45	10.70	10.15	9.49	9.86	8.82	8.39									
	Low	10.50	9.11	9.04	8.73	8.65	7.60	7.35									
	Close	10.68	9.28	9.185	9.182	8.622	7.87	7.47									

Source: Commodity Exchange Inc., of N.Y. (COMEX)

World[2] Silver Consumption In Millions of Troy Ounces

Year	Industrial Uses									Coinage							World Total
	Canada	France	W. Germany	India	Italy	Japan	Un. Kingdom	United States	World Total	Canada	France	W. Germany	Austria	Mexico	United States	World Total	
1969	5.7	19.3	50.0	16.0	29.0	41.5	24.5	141.5	350.6	—	.6	5.0	3.3		19.4	40.0	390.6
1970	6.0	15.5	48.2	16.0	32.0	46.0	25.0	128.4	338.9	—	3.7	7.3	4.1		.7	26.9	365.8
1971	6.0	15.6	59.9	16.0	30.5	46.5	25.0	129.1	351.4	.2	.4	19.2	3.2		2.5	28.3	379.7
1972	7.4	16.5	60.0	13.0	32.0	54.3	27.0	151.7	388.9	.1	.3	22.6	5.8		2.3	38.4	427.3
1973	8.6	14.3	64.7	13.0	41.5	69.0	31.0	195.9	477.8	1.4	.1	9.5	6.6		.9	29.2	507.0
1974	9.6	15.5	59.9	15.0	38.6	46.5	25.0	177.0	409.4	8.9	.1	8.8	5.6		1.0	27.9	436.9
1975	10.6	21.2	38.9	13.0	28.9	46.4	28.0	157.7	376.8	10.4	5.2	4.3	13.4	—	2.7	38.8	415.6
1976	9.5	19.0	50.8	18.0	32.1	60.7	28.0	170.5	437.5	8.4	6.7	2.9	6.9	—	1.3	29.7	467.2
1977	8.8	20.6	59.5	17.6	33.8	63.2	32.2	153.6	433.6	.3	6.9	2.6	3.0	4.2	.4	23.4	457.0
1978	9.0	22.2	26.4	20.0	41.8	64.8	29.0	160.2	442.6	.3	11.1	3.6	3.5	6.3	.1	36.3	478.9
1979	8.1	21.5	37.1	19.0	33.0	68.7	26.5	157.2	419.8	.3	7.7	3.7	5.0	5.0	.1	27.8	447.6
1980	8.7	20.2	29.1	19.0	22.5	61.7	20.5	124.7	349.9	.2	—	—	4.3	6.1	.1	13.7	363.6
1981[1]	9.0	20.6	24.0	19.0	28.5	58.0	21.0	132.6	363.3	.2	—	—	3.0	—	.1	6.0	369.3
1982																	

[1] Preliminary. [2] Non-communist areas only. *Source: Handy & Harman*

U.S. Consumption of Silver, by End Use In Thousands of Troy Ounces

Year	Bearings	Brazing Alloys & Solders	Catalysts	Dental & Medical	Electroplated Ware	Electrical & Electronic Products		Jewelry	Mirrors	Photographic Materials	Sterling Ware	Coins, Medallions[2]	Total Net Industrial Consumption	Coinage	Total Consumption
						Batteries	Contacts & Conductors								
1969	481	16,549	4,081	1,591	12,706	3,799	34,555	3,011	1,510	41,380	20,291	1,592	141,546	19,408	160,594
1970	383	14,035	1,999	1,804	11,437	6,342	25,183	5,119	1,386	38,044	19,115	3,556	128,404	709	129,113
1971	355	12,085	1,730	1,485	10,909	5,631	27,954	3,447	1,112	36,073	22,729	5,636	129,146	2,474	131,620
1972	344	12,214	3,430	1,991	12,716	6,044	36,434	4,870	1,225	38,251	27,163	6,381	151,063	2,284	153,347
1973	375	17,736	5,988	3,022	14,542	4,155	40,209	5,778	2,579	51,979	40,100	9,477	195,941	920	196,861
1974	416	14,514	7,293	2,401	13,179	4,195	31,218	5,235	3,947	49,579	22,147	22,272	177,015	1,017	178,031
1975	458	13,582	8,785	1,503	8,717	4,253	27,211	12,734	3,150	46,074	23,717	7,186	157,650	2,740	160,390
1976	273	11,198	12,267	1,942	9,534	3,490	32,329	10,995	4,622	55,350	19,815	8,240	170,559	1,315	171,874
1977	523	12,362	8,883	2,232	6,844	5,783	31,316	8,059	2,131	53,679	16,690	4,252	153,613	91	153,704
1978	373	10,987	8,197	2,033	7,274	6,029	30,756	6,766	1,862	64,299	17,908	2,727	160,165	45	160,210
1979	332	10,912	5,637	2,295	8,065	4,583	33,506	5,358	1,850	65,978	13,088	4,676	157,258	168	157,426
1980[1]	649	8,508	3,035	2,212	4,350	5,976	27,796	5,893	672	49,825	9,082	4,693	124,694	72	124,766
1981[3]	249	9,699	5,360	1,938	5,527	5,108	31,271	6,600	615	53,055	5,779	3,332	132,907	179	133,086

[1] Preliminary. [2] Includes commemorative objects. [3] Estimate. *Source: Bureau of Mines*

U.S. Mine Production of Recoverable Silver In Thousands of Troy Ounces

Year	Arizona	California	Colorado	Idaho	Michigan	Missouri	Montana	Nevada	New Mexico	New York	Tennessee	So. Dakota	Utah	Other States	Total
1969	6,141	492	2,599	18,930	1,009	1,442	3,429	884	466	32	79	124	5,954	320	41,906
1970	7,330	451	2,933	19,115	892	1,817	4,304	718	782	24	95	120	6,030	393	45,006
1971	6,170	444	3,390	19,140	670	1,661	2,748	601	782	18	131	107	5,294		41,564
1972	6,653	176	3,664	14,251	785	1,972	3,325	595	1,017	25	83	100	4,300		37,233
1973	7,199	56	3,942	13,620	850	2,058	4,350	624	1,111	54	73	72	3,619	197	37,827
1974	6,356	42	2,784	12,436	643	2,387	3,512	872	1,195	64	20	62	3,208	171	33,762
1975	6,286	80	3,366	13,868	632	2,525	2,617	1,609	792	56	54	68	2,822	164	34,938
1976	7,615	57	4,083	11,561	311	2,277	3,279	784	892	49	78	58	3,134	146	34,328
1977	6,828	58	4,663	15,292	335	2,363	3,367	738	918	56	60	69	3,283	125	38,166
1978	6,638	58	4,217	18,379	N.A.	2,056	2,918	804	895	21	N.A.	53	2,885	457	39,385
1979	7,479	64	2,809	17,144	N.A.	2,201	3,302	560	N.A.	11	N.A.	58	2,454	2,003	38,087
1980[1]	5,668	49	2,987	13,695	N.A.	2,357	2,024	671	N.A.	21	N.A.	51	2,087	1,707	31,327
1981[2]	8,103	54	3,034	16,494		1,809	2,765	397				56	2,869	1,978	37,560
1982															

[1] Preliminary. [2] Forecast. *Source: Bureau of Mines*

Commodity Exchange Inc. (COMEX) Warehouse Stocks of Silver In Millions of Ounces

Year	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1974	63.9	63.9	60.6	64.3	69.8	74.9	76.8	72.3	69.6	68.2	68.4	69.6
1975	68.0	69.5	72.6	70.5	73.7	77.2	78.3	80.9	80.2	82.7	82.4	81.7
1976	86.3	84.1	82.8	79.3	77.3	71.8	65.3	58.0	54.6	50.0	49.3	52.3
1977	54.8	56.5	57.2	63.3	65.6	67.0	69.4	70.6	65.2	64.9	60.2	64.5
1978	68.7	70.0	72.3	74.2	73.4	70.8	72.8	73.6	72.4	66.7	64.3	63.0
1979	58.2	52.0	51.8	49.2	50.3	55.5	54.1	48.9	47.3	51.8	60.3	70.2
1980	74.8	76.0	77.8	83.1	84.2	82.3	82.0	81.7	82.6	82.2	87.1	86.1
1981	86.9	86.8	85.4	84.6	85.7	85.1	86.6	85.4	78.8	78.1	76.0	77.3
1982	77.6	76.3	78.5	77.1	79.9							
1983												

Source: Commodity Exchange, Inc.—New York

Month End Total Open Interest of Silver Futures at New York (COMEX) & Chicago
In Thousands of Contracts

Year	At New York (COMEX)												At Chicago (CBT) ("Old")			
	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1	Jan. 1	Apr. 1	July 1	Oct. 1
1975	123.9	95.2	84.5	88.4	74.7	85.6	84.6	88.9	118.1	140.5	176.5	214.5	118.1	62.2	99.6	124.2
1976	250.3	197.6	176.4	176.7	169.0	168.1	138.4	130.7	138.1	155.7	208.6	287.2	169.8	88.4	121.6	127.5
1977	398.1	338.0	309.5	282.2	234.6	205.8	156.1	130.1	135.6	181.7	211.3	241.7	186.0	156.8	183.5	211.6
1978	287.8	245.4	242.4	226.0	217.8	208.6	196.2	212.6	214.4	239.1	277.5	304.8	275.9	240.2	230.0	235.4
1979	299.5	242.9	218.7	203.5	185.7	170.0	153.3	154.5	156.2	167.3	144.3	133.4	252.8	180.5	166.6	156.7
1980	123.6	77.7	63.4	48.5	27.1	23.8	22.9	25.1	24.5	29.8	35.0	36.0	88.9	23.6	22.9	24.0
1981	32.0	27.6	24.3	25.7	26.1	28.8	29.4	31.0	31.0	29.9	32.3	27.5	28.0	21.2	29.8	16.3
1982	27.6	27.5	25.0	29.3	28.3								9.8	6.1		
1983																

Source: Commodity Exchange of N.Y. (COMEX) & Chicago Board of Trade

Volume of Trading in Silver Futures at New York (COMEX) In Thousands of Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	330.0	270.7	391.0	287.5	244.9	247.2	254.1	316.2	192.0	469.0	438.0	381.4	3,822
1979	460.0	388.3	304.6	367.3	545.3	480.5	383.9	404.1	283.1	191.7	178.6	111.1	4,081
1980	167.7	76.2	143.5	94.0	46.6	63.3	45.6	41.8	100.9	92.9	97.1	90.6	1,059
1981	70.7	71.0	74.9	72.6	58.0	97.4	77.4	116.0	171.9	121.4	136.6	172.8	1,241
1982	112.8	193.9	211.5	192.9									
1983													

Source: Commodity Exchange of N.Y. (COMEX)

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Commodity Research Bureau, Inc.
ONE LIBERTY PLAZA • NEW YORK, N. Y. 10006

United States Production[1] of Refined Silver from All Sources In Thousands of Troy Ounces

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1969	8,666	7,566	9,642	9,358	8,579	7,872	7,320	6,181	5,966	7,204	6,172	6,747	80,273
1970	6,243	7,029	7,025	7,861	7,453	6,077	6,096	5,450	4,997	5,947	5,837	6,724	76,739
1971	4,937	6,365	8,456	6,436	7,014	6,042	1,333	1,776	4.881	6,596	6,580	5,738	66,155
1972	6,128	6,612	5,944	6,818	6,020	5,339	6,632	6,601	7,024	6,529	5,105	5,767	74,519
1973[2]	55,975				12,406	12,633	11,650	13,841	12,235	15,535	13,541	13,949	161,765
1974	14,476	13,483	17,322	17,147	19,300	18,550	9,679	12,455	14,050	14,019	16,148	19,890	186,519
1975	16,815	14,623	14,619	13,693	12,281	12,267	12,090	12,996	13,222	13,832	12,372	14,251	161,568
1976	9,369	11,558	14,260	14,155	10,952	12,633	8,771	10,342	12,598	13,998	16,018	18,378	154,230
1977	13,196	10,114	13,173	13,335	13,260	14,100	5,781	7,840	10,412	13,643	13,002	14,966	143,125
1978	10,694	12,699	12,503	10,871	12,196	12,000	10,186	12,214	10,727	12,666	11,526	12,721	141,003
1979	10,592	10,888	13,070	11,451	11,938	11,600	12,433	9,837	9,118	12,476	12,221	17,008	155,723
1980	18,088	17,548	17,673	16,941	10,400	14,800	6,676	11,583	10,785	10,603	10,578	14,553	166,326
1981	12,889	12,000	11,352	11,889	10,402	11,500	10,433	10,114	10,533	9,954	8,105	11,589	130,783
1982	9,043	8,407											

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[1] Output of commercial bars .999 fine, including U.S. Mint purchases of crude. Production is from both foreign and domestic silver. [2] Data beginning 1973 are for production from all sources. (Primary, Coins, old & new scrap). The total for 1972 was 178,665,000 oz. *Sources: American Bureau of Metal Statistics; The Silver Institute, Inc.*

Value of United States Exports of Silver (Excludes Silver Coin) In Millions of Dollars

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1970	8.6	10.4	5.8	3.4	4.4	1.8	1.3	2.9	1.9	1.1	1.3	5.9	27.6
1971	4.2	2.0	3.3	2.7	1.5	1.3	.9	.7	1.6	.2	.2	1.4	19.5
1972	.9	1.5	10.6	.6	2.9	1.2	16.3	9.0	.8	1.5	1.6	2.3	31.6
1973	.6	.4	2.0	.9	1.7	.9	5.6	4.6	3.3	1.9	1.6	1.1	27.6
1974	1.1	2.4	10.4	2.9	13.2	14.4	5.8	8.7	1.6	5.3	8.2	7.7	81.7
1975	20.3	10.0	23.6	11.2	12.0	5.0	37.8	9.5	5.0	4.8	5.2	3.8	147.6
1976	2.9	4.3	11.5	5.0	4.6	3.3	6.6	4.9	7.3	2.6	2.9	5.3	61.4
1977	5.4	7.0	3.6	6.7	4.6	4.6	14.6	7.8	10.7	4.6	.5	14.7	84.6
1978	8.8	10.7	7.9	13.7	5.8	6.2	6.1	12.5	21.0	12.5	8.4	5.5	119.1
1979	8.9	15.3	11.2	6.4	12.5	13.9	10.7	7.9	32.1	78.7	166.7	100.2	471.2
1980	298.4	345.3	253.4	489.0	82.0	140.5	57.5	65.5	29.0	33.5	40.9	74.6	1,909.7
1981	56.6	45.6	41.2	26.6	11.7	31.9	22.0	22.2	32.7	18.9	8.9	14.2	332.5
1982	11.7												

Source: Department of Commerce

Value of United States Imports of Silver (Excludes Silver Coin) In Millions of Dollars

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1970	5.9	5.6	7.6	8.0	4.3	4.6	3.7	6.7	5.3	4.4	3.8	4.9	65.0
1971	5.3	2.7	5.2	5.9	2.9	3.8	3.6	4.7	4.1	3.2	4.2	3.9	49.5
1972	5.3	4.7	5.3	3.5	6.4	3.4	6.0	3.0	5.4	5.9	5.7	4.8	59.4
1973	8.3	7.0	8.7	6.8	7.5	15.2	33.0	27.6	30.8	22.2	66.4	32.2	268.6
1974	13.5	20.5	67.4	58.5	39.1	47.3	69.1	30.5	31.3	37.9	43.8	42.6	501.5
1975	22.1	26.1	36.2	28.6	31.4	28.4	22.1	25.2	28.0	33.0	18.3	31.1	330.6
1976	28.0	18.6	27.6	17.7	15.8	29.8	22.5	52.1	22.9	23.2	31.5	38.8	325.3
1977	36.5	23.7	41.9	31.2	25.8	30.2	17.9	31.3	31.8	26.4	32.7	25.6	354.8
1978	34.1	30.1	35.8	33.8	29.9	33.2	32.2	33.1	30.6	35.7	30.0	30.6	389.0
1979	32.2	38.7	95.5	29.1	61.6	50.1	52.8	43.8	78.0	202.2	120.8	155.6	961.8
1980	258.5	174.3	195.9	91.5	63.9	108.3	99.0	86.0	135.0	129.5	138.1	122.7	1,602.3
1981	133.0	127.5	85.9	90.3	89.8	85.4	67.9	80.2	71.7	77.2	65.9	61.6	1,036.5
1982	72.5												

Source: Department of Commerce

Soybean Meal

(See feature study on page 42)

U.S. soybean meal production was expected to expand 5 percent to 25.4 million short tons during 1981/82, according to the USDA. While supplies were expected to be larger and prices 10 to 20 percent lower, domestic disappearance prospects hinged on improvement in the U.S. economy and its impact on the livestock industry. The value of the dollar in foreign exchange markets was expected to largely influence meal exports.

The early 1982 18.1-million-short-ton USDA estimate for domestic disappearance of soybean meal reflected a 200,000-ton downward revision from its previous estimate. The revision occurred because livestock production prospects had fallen considerably, indicating demand for soybean meal has shifted downward. In particular, the December 1981 survey of pork producers indicated a sharp reduction in the number of hogs that were expected be marketed in mid-1982, and a large drop in the breeding herd as well. The latter reduction would affect the number of hogs marketed during the last half of 1982. The survey revealed that the estimated number of hogs and pigs was 9 percent below December 1, 1980, and that the number of hogs kept for breeding was 7 percent lower.

U.S. soybean meal exports were projected to reach 7.2 million short tons, up 6 percent, as foreign buyers were expected to respond to lower prices and some weakening of the dollar in recent months. Exports in October through December 1981 were up 216,000 short tons, despite unseasonably strong Brazilian exports. Principal buyers of U.S. meal into early 1982 were the Netherlands—characteristically the largest importer—and Italy and Germany. The spring 1982 dispute between Great Britain and Argentina, a major soybean exporter, was expected to have a constructive influence on U.S. soybean meal exports.

Soybean meal prices were expected to fall well below 1980/81 highs. The 1981/82 season average price was forecast between $170 and $195 per ton, with a mid-point estimate of $180 per ton. Through December 1981, monthly prices averaged slightly above the $180 estimate.

Futures Markets

Soybean meal futures are traded on the Chicago Board of Trade, and on the London Commodity Exchange.

Supply and Distribution of Soybean Meal in the United States In Thousands of Short Tons

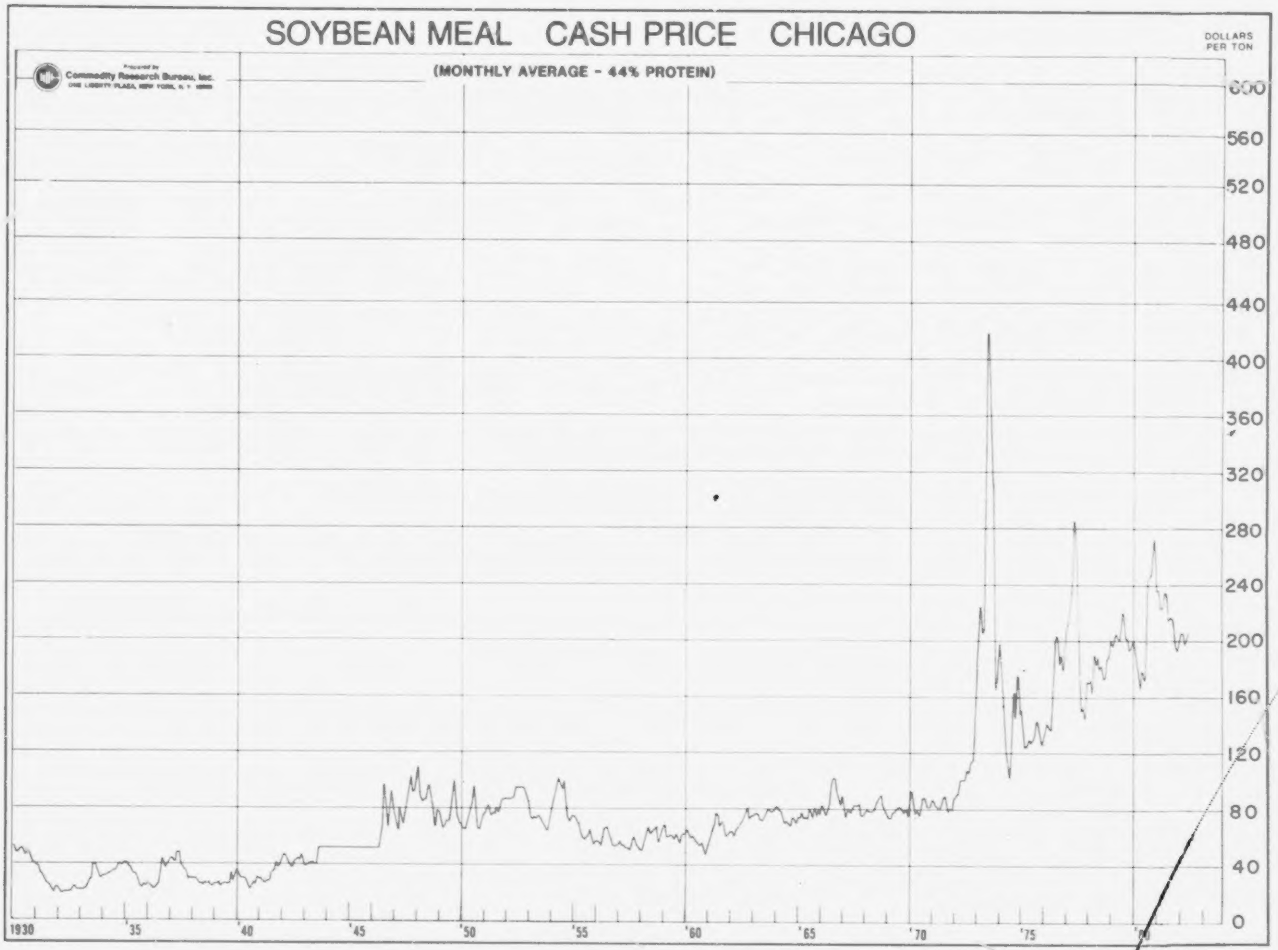
	Supply					Distribution				Price Per Ton Bulk, Decatur	
		Production									
Year Begin. Oct.	For Stocks Oct. 1	Total	For Animal Feed	For Edible Protein Pdt's.	Total	(Domestic) Feed[2]	Exports	Shipments to U.S. Terr.	Total	44% Protein	49–50% Protein
1969–0	157	17,596			17,753	13,514	4,035	67	17,616	78.45	86.61
1970–1	137	18,035			18,172	13,406	4,559	61	18,126	78.51	84.33
1971–2	146	17,024			17,170	13,110	3,805	63	16,978	90.20	98.20
1972–3	192	16,709			16,900	11,920	4,745	52	16,717	228.99	253.42
1973–4	183	19,674	N.A.	N.A.	19,858	13,766	5,548	36	19,350	146.35	160.57
1974–5	507	16,701	16,437	265	17,209	12,501	4,299	50	16,850	130.86	141.26
1975–6	358	20,754	20,395	359	21,112	15,552	5,145	61	20,758	147.77	157.68
1976–7	355	18,488	18,101	388	18,843	14,001	4,559	55	18,615	199.80	218.73
1977–8	228	22,557	21,405	410	22,785	16,462	6,080	61	22,542	163.56	179.45
1978–9	243	24,354	23,205	368	24,597	17,720	6,610	47	24,330	190.06	206.30
1979–0	267	27,105	25,930	297	27,372	19,215	7,932	60	27,147	181.91	195.55
1980–1[1]	226	24,312	23,232	286	24,538	17,597	6,778	—	24,375	218.18	235.13
1981–2[3]	163	25,287			25,450	18,000	7,200	—	25,200	182.50	

[1] Preliminary. [2] Includes small quantities used for industrial purposes, estimated at 30,000 tons annually. [3] Estimate. *Source: Economic Research Service, U.S.D.A.*

U.S. Exports of Soybean Cake & Meal by Country of Destination In Thousands of Metric Tons[2]

Yr. Beg. Oct. 1	Belg.-Lux.	Japan	Canada	Denmark	France	W. Germany	Spain	Ireland	Italy	Netherlands	Philippines	Poland	United Kingdom	Yugoslavia	Grand Total
1969–0	219.0	40.3	270.9	32.5	622.8	855.9		60.4	309.5	659.0	49.1	109.9	42.9	173.8	4,035
1970–1	308.8	32.8	242.1	85.6	712.1	987.4		36.5	330.8	675.4	53.8	112.3	100.1	186.8	4,559
1971–2	328.4	24.5	204.5	95.5	610.3	705.0		72.4	295.6	482.8	58.0	65.8	58.3	116.2	3,805
1972–3	179.8	287.0	199.2	114.3	678.5	987.7	140.0	76.3	445.0	248.4	14.2	337.0	48.5	152.2	4,745
1973–4	204.7	137.2	289.8	56.6	866.6	1,192	96.0	53.3	631.6	313.3	49.9	287.6	60.2	316.4	5,548
1974–5	243.8	.1	224.5	17.6	786.7	995.4	69.0	37.3	422.2	428.7	12.6	220.6	91.4	—	4,299
1975–6[2]	238.2	120.1	277.8	35.1	761.9	1,008	347.3	49.1	421.4	102.5	.1	360.8	54.5	183.5	4,667
1976–7	83.4	217.5	256.4	36.8	131.0	953.1	143.3	36.1	428.8	565.8	—	256.9	46.7	95.2	4,117
1977–8	37.0	271.3	339.5	26.1	146.6	1,004	237.3	83.6	741.6	654.7	21.0	493.3	65.0	113.1	5,515
1978–9	3.8	204.5	416.0	65.6	355.1	717.6	253.5	117.9	691.1	748.1	—	243.0	66.8	57.9	5,998
1979–0	13.3	210.0	355.9	48.5	270.2	1,013	58.0	74.1	855.7	1,490	41.1	400.0	69.0	152.9	7,196
1980–1[1]	48.9	153.7	331.2	.1	8.0	710.3	21.6	.5	684.3	1,502	—	312.3	56.9	191.4	6,148
1981–2															

[1] Preliminary. [2] Data prior to 1975–6 are in THS. OF SHORT TONS. *Source: The Bureau of the Census, U.S.D. of Commerce*



Average Price of Soybean Meal (44% Protein) at Chicago In Dollars per Ton (Bagged)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1970	92.50	90.25	76.80	79.60	76.20	79.90	88.10	89.20	86.00	82.40	83.20	87.40	84.35
1971	85.60	82.60	82.40	80.25	84.25	87.50	90.25	84.75	79.25	80.75	79.80	86.60	83.67
1972	88.60	91.00	97.00	100.60	101.40	101.20	107.50	107.10	113.90	114.90	129.40	180.60	111.09
1973	195.00	225.30	206.50	209.80	321.20	418.90	317.80	291.60	214.70	166.20	173.80	198.80	244.97
1974	178.80	166.80	154.20	124.30	116.30	107.10	145.80	164.00	146.00	176.00	148.80	151.20	148.28
1975	137.00	125.00	125.60	129.90	128.30	129.20	132.30	143.40	143.00	135.30	126.90	134.60	132.54
1976	137.75	141.75	137.50	136.60	162.10	198.10	204.10	183.50	189.60	179.80	191.40	207.80	172.42
1977	217.20	221.20	236.40	285.80	268.40	235.50	172.50	150.90	154.25	145.40	172.30	170.70	202.55
1978	173.10	164.00	190.50	184.10	188.50	180.80	183.10	174.10	175.40	188.40	188.70	200.40	182.59
1979	196.50	202.40	306.20	202.80	199.70	221.40	213.60	201.00	200.70	193.50	195.20	200.10	202.76
1980	192.40	186.50	176.90	166.60	178.90	173.40	200.40	220.10	247.20	259.10	274.10	236.40	209.33
1981	236.20	225.30	223.40	235.10	234.10	214.20	217.40	215.50	203.30	194.25	191.75	201.00	215.96
1982	204.50	204.50	197.10										

Source: Consumer Marketing Service, U.S.D.A.

SOYBEAN MEAL

Production & Foreign Trade of Soybean Cake & Meal in the U.S. In Thousands of Short Tons

Crop Year	Production													Soybeans (Meal Equivalent of Exports)[2]
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Total	
1972–3	1,562	1,661	1,618	1,656	1,523	1,507	1,364	1,449	1,226	1,043	1,116	984	16,709	11,208
1973–4	1,465	1,688	1,704	1,757	1,658	1,786	1,647	1,694	1,630	1,704	1,654	1,288	19,674	13,170
1974–5	1,467	1,458	1,427	1,484	1,282	1,436	1,368	1,245	1,256	1,408	1,533	1,338	16,702	10,024
1975–6	1,701	1,697	1,808	1,748	1,617	1,820	1,830	1,891	1,772	1,670	1,556	1,645	20,754	13,316
1976–7	1,747	1,763	1,741	1,725	1,709	1,771	1,596	1,454	1,340	1,211	1,187	1,243	18,488	13,200
1977–8	1,781	2,017	2,044	2,007	1,778	2,050	1,903	1,959	1,725	1,681	1,758	1,695	21,629	16,895
1978–9	2,052	2,069	2,222	2,095	1,892	2,052	1,921	1,999	1,910	1,836	1,759	1,766	23,573	17,681
1979–0	2,214	2,359	2,431	2,477	2,319	2,379	2,129	2,167	1,922	1,990	1,945	1,896	26,227	21,118
1980–1	2,253	2,291	2,179	2,133	1,838	2,074	1,976	1,896	1,709	1,681	1,726	1,763	23,518	
1981–2[1]	2,505	2,329	2,453	2,269	2,092									

[1] Preliminary. [2] Calculated at 47.5 lbs of meal per bushel. *Source: Economic Research Service, U.S.D.A.; Bureau of Census.*

Month End Open Interest of Soybean Meal Futures at the Chicago Board of of Trade In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	30,042	34,991	42,325	40,969	50,633	50,628	52,895	56,288	52,315	60.233	63,302	61,014
1979	48,076	54,316	54,873	48,923	49,678	56,627	47,847	47,804	49,348	56,178	52,426	50,072
1980	49,490	53,379	51,143	47,016	46,603	47,769	50,797	61,261	66,805	82,421	84,051	64,965
1981	53,077	50,584	47,002	51,831	45,160	50,909	45,901	48,379	48,152	47,619	48,140	38,804
1982	41,034	39,700	43,830	45,035								

Source: Chicago Board of Trade

Volume of Trading of Soybean Meal Futures at the Chicago Board of Trade In Thousands of Contracts

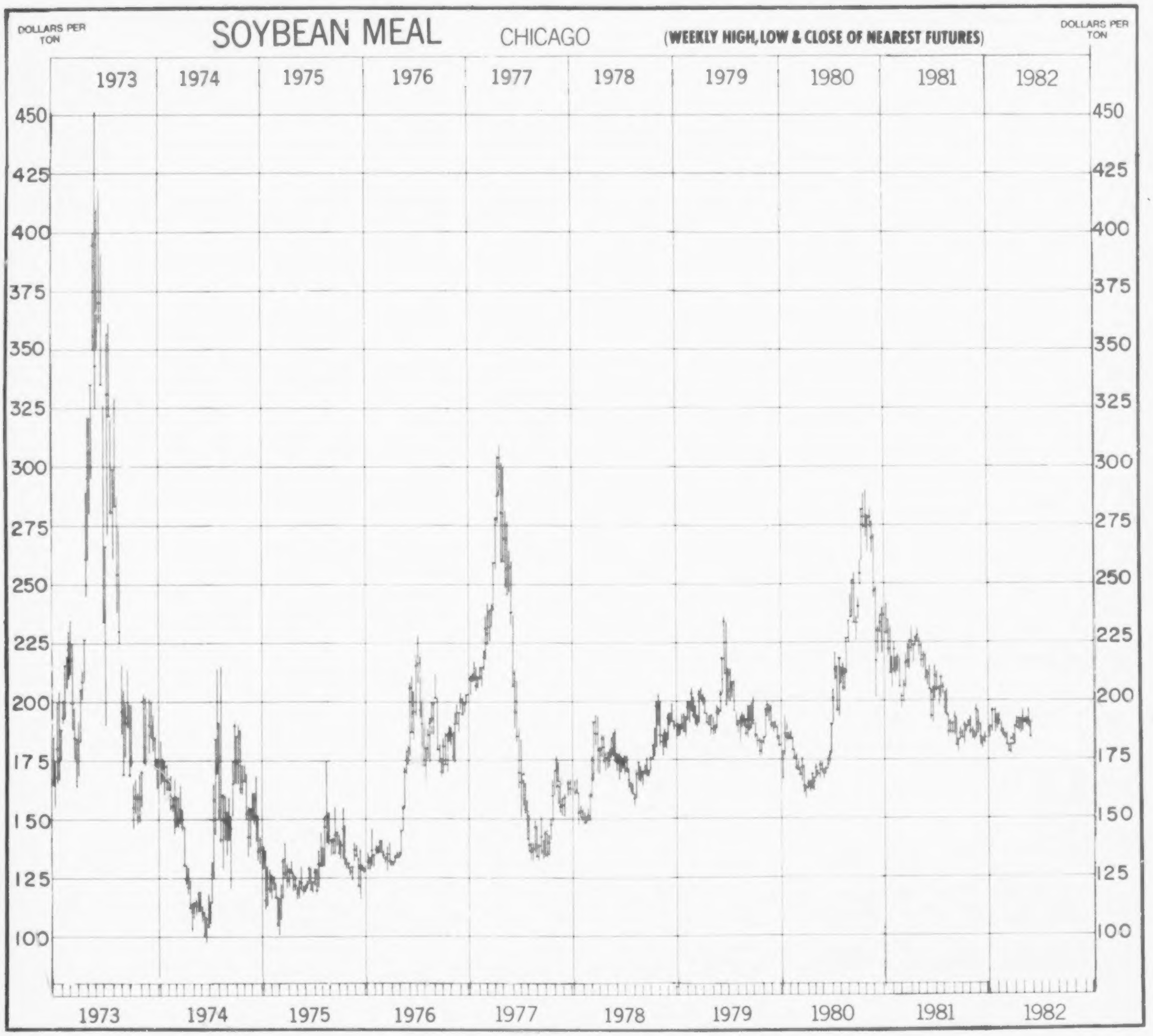
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	173.1	123.6	275.5	213.6	190.2	224.5	191.3	207.3	162.2	257.3	260.2	214.2	2,493
1979	204.7	244.5	290.3	219.4	211.2	382.2	257.9	182.6	186.3	219.6	183.3	146.8	2,648
1980	172.6	159.2	152.1	183.0	159.1	183.9	370.8	281.5	371.9	413.6	369.3	401.7	3,219
1981	261.9	203.1	220.9	254.3	218.4	294.8	301.8	241.3	276.3	219.0	242.8	304.4	3,040
1982	219.6	238.1	258.6	279.7									

Source: Chicago Board of Trade

High, Low & Closing Prices of May Soybean Meal Futures on the Chicago Board of Trade $ per Ton

Year of Delivery		Year Prior to Delivery										Delivery Year					Life of Delivery Range
		Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	
1978	High	207.0	209.0	207.5	216.5	181.0	161.5	161.8	162.3	181.0	170.5	169.2	158.5	194.5	186.0	182.3	216.5
	Low	188.5	185.0	190.0	183.0	158.0	143.6	143.5	147.5	161.0	158.6	153.2	152.1	155.0	169.1	172.3	143.5
	Close	196.0	195.0	203.5	189.0	158.0	147.8	151.3	162.1	163.1	166.7	153.6	154.1	178.7	176.0	179.0	—
1979	High	—	180.0	182.0	181.0	172.0	178.5	183.0	202.0	197.0	193.9	195.5	209.5	205.5	202.7	194.0	209.5
	Low	—	168.0	167.0	168.0	165.0	165.1	172.5	179.0	179.7	184.0	184.5	190.5	193.7	186.5	185.8	165.0
	Close	—	169.0	181.2	173.2	167.7	175.8	178.5	197.0	187.0	188.3	192.2	203.2	202.2	186.9	188.9	—
1980	High	—	201.0	204.0	233.0	221.0	205.5	211.3	213.0	204.5	201.2	197.5	193.0	182.0	169.0	173.0	233.0
	Low	—	195.7	197.5	202.0	196.0	194.5	197.5	188.5	189.3	189.6	179.9	179.0	160.7	158.1	163.3	158.1
	Close	—	200.0	203.7	202.5	198.7	203.0	207.0	192.7	199.9	189.7	190.3	179.4	161.4	163.9	168.0	—
1981	High	206.5	200.5	201.0	205.0	238.0	242.5	265.0	299.0	300.5	294.8	259.5	232.5	224.0	231.7	230.2	300.5
	Low	193.0	191.0	191.5	190.3	205.0	217.0	241.0	244.3	275.0	220.7	213.7	214.5	205.2	216.9	214.0	190.3
	Close	195.2	195.5	192.0	205.0	229.6	242.5	251.7	290.2	292.7	249.0	220.7	215.2	220.8	226.9	214.0	—
1982	High	—	261.5	252.0	242.0	241.0	230.0	218.0	210.5	206.5	203.5	197.0	197.7	188.5	196.0		
	Low	—	248.5	234.5	221.0	223.0	207.0	203.5	201.8	194.1	181.5	187.8	182.7	178.4	186.2		
	Close	—	249.5	239.0	225.0	231.5	209.0	206.5	203.5	197.3	188.3	195.9	186.1	187.7	190.9		
1983	High	—	215.0														
	Low	—	203.0														
	Close	—	209.5														

Source: Chicago Board of Trade



Stocks (at Oil Mills) of Soybean Cake & Meal in the United States In Thousands of Short Tons

Year	Oct. 1	Nov. 1	Dec. 1	Jan. 1	Feb. 1	Mar. 1	April 1	May 1	June 1	July 1	Aug. 1	Sept. 1
1970–1	137.0	168.8	182.7	129.7	185.5	189.3	153.2	168.1	219.3	169.1	215.0	215.4
1971–2	145.8	205.2	192.8	144.3	153.9	135.5	160.5	218.0	186.7	189.1	243.2	221.6
1972–3	191.7	185.7	170.7	217.9	193.3	210.0	206.3	213.5	203.4	204.5	214.4	212.8
1973–4	183.2	234.3	242.2	284.6	249.0	281.1	361.6	348.0	427.9	514.3	475.9	535.4
1974–5	507.3	508.2	563.7	529.0	541.0	540.0	556.7	470.5	448.1	421.7	394.8	404.5
1975–6	358.3	396.1	441.4	371.4	378.1	419.5	358.3	358.8	462.8	369.8	406.9	350.5
1976–7	354.9	423.5	427.7	353.9	384.7	429.9	412.6	449.0	408.3	390.7	399.0	270.4
1977–8	228.3	270.0	239.8	245.1	251.7	239.7	227.3	308.2	263.3	191.1	262.6	234.1
1978–9	242.9	210.4	178.2	260.5	215.1	198.4	210.4	231.6	207.4	205.3	232.2	140.3
1979–0	224.3	204.1	164.2	207.7	158.7	160.6	219.1	193.9	265.0	262.0	232.4	225.1
1980–1	189.7	211.1	350.0	221.8	209.7	214.4	232.2	184.4	254.0	209.7	156.1	199.7
1981–2[1]	135.4	309.2	314.8	279.4	315.7	306.1						

[1] Preliminary. *Source: Economic Research Service, U.S.D.A.; Bureau of the Census*

Soybean Oil

U.S. 1981/82 soybean oil production was forecast by the USDA to reach 11.4 billion pounds, up 1 percent from 1980/81. The increased production, coupled with a record carryin of 1.7 billion pounds, put total soybean oil supplies at 13.1 billion pounds.

Domestic disappearance of soybean oil in 1981/82 was projected to climb 335 million pounds over the previous season's level, to 9.45 billion. Generally, over 90 percent of the soybean oil that disappears domestically can be traced to the manufacture of baking and frying fats, salad and cooking oils, and margarine. Expanding consumption of these products, hence soybean oil, has primarily resulted from increases in population and real income. There is nearly a one-to-one correspondence in domestic soybean oil use and real income. This relationship suggested that use would receive little or no boost in early 1982 because increases in real incomes were not expected to occur until mid-1982. With this in mind, fast food outlets which are heavy users of soybean oil products, did not seem likely to increase use or build inventories until the pinch of the 1982 recession subsided and business prospects improved.

While consumption of vegetable oil end products in 1982 was expected to show little gain, an increase in the proportion of soybean oil used in their manufacture appeared likely to occur because relatively low soybean oil prices could encourage substitution of soybean oil for more expensive oils.

Exports in 1981/82 of U.S. soybean oil were projected to jump 35 percent above the 1980/81 level to 2.2 billion pounds. Pakistan and India were the principal U.S. soybean oil importers as of early 1982.

If early 1982 USDA forecasts of world soybean oil trade were in fact realized, U.S. oil exports would account for about 27 percent of world trade—regaining some of the share lost to Brazil in 1980/81. While USDA projections indicated a 29-percent decline in Brazilian exports during 1981/82, large EEC imports of U.S. soybeans could ultimately result in expanding EEC soybean oil supplies and export availabilities. The dispute between Argentina and Great Britain in spring, 1982 called into question the extent of Argentina's 1982 exports.

Under early 1982 supply/disappearance prospects, stocks of soybean oil were expected to dip to 1.5 billion pounds by the end of the 1981/82 season.

Futures Market

Soybean oil futures are traded on the Chicago Board of Trade, and the London Commodity Exchange.

Production, Consumption, Stocks and Foreign Trade of Soybean Oil in the U.S. In Millions of Pounds

	Production		Consumption		Stocks December 31			Exports	
Year	Crude	Refined	In Refining	In End Pdt's.	Crude	Refined	Imports for Consumption	Crude	Refined
1970	8,086	6,276	6,523	6,322	450.7	304.9	—	1,119.4	367.6
1971	8,082	6,298	6,551	6,323	447.6	354.6	—	1,288.6	427.5
1972	8,084	6,521	7,032	6,827	581.5	315.0	—	841.6	452.1
1973	7,540	6,509	7,046	6,831	411.7	278.8	—	723.9	243.8
1974	8,705	6,812	7,000	7,039	375.6	299.4	.1	1,607	
1975	7,861	6,423	6,686	6,830	495.3	304.6	—	758	
1976	9,640	7,185	7,476	7,577	1,141	347.1	—	901.7	77.3
1977	8,836	7,790	8,092	7,451	524.0	340.0	.2	1,427.3	81.3
1978	10,625	8,618	8,955	8,175	623.1	347.5	—	1,560.8	77.8
1979[1]	11,504	9,110	9,456	8,656	656.6	373.5	—	2,371	
1980[1]	12,097	8,982	9,300	8,585	1,369.6	368.2		2,315	
1981[1]	11,301	9,461	9,817	9,024	1,680.2	343.6		1,698	
1982									

[1] Preliminary. *Source: Bureau of Census*

U.S. Exports of Soybean Oil,[1] by Country of Destination In Thousands of Metric Tons[3]

Yr. Beg. Oct. 1	Australia	Colombia	Canada	Chile	Ecuador	France	Haiti	Peru	India	Israel	Mexico	Morocco	Pakistan	Panama	Egypt	Grand Total
1970–1		17	50	58			26	111	284	41	1	90	278			1,742
1971–2		15	43	2			27	84	144	44	—	122	142			1,398
1972–3		7	38	2	30		21	92	95	51	33	7	130	11	2	1,066
1973–4		24	73	69	29		16	135	94	21	135	43	197	39	3	1,435
1974–5		18	44	6	28		26	56	8	15	119	5	26	24	8	1,028
1975–6[3]	13.1	14.2	31.8	1.0	19.5	—	14.3	14.5	15.8	9.9	3.1	4.9	150.8	13.2	.5	443
1976–7	20.1	27.3	26.0	12.0	16.2	—	17.2	57.3	252.2	3.1	15.4	3.0	119.2	12.5	1.4	702
1977–8	21.0	44.1	27.7	22.0	26.0	5.0	13.8	68.6	247.7	6.3	29.6	5.6	95.8	8.3	6.1	933
1978–9	16.2	84.1	20.9	22.8	22.4	3.6	17.2	29.4	181.1	9.8	5.1	6.0	163.3	19.0	13.9	1,059
1979–0[2]	16.4	82.6	14.8	13.2	35.3	2.9	22.8	36.2	427.7	9.6	31.4	2.3	147.4	17.9	6.0	1,220
1980–1[2]																739
1981–2[2]																1,000

[1] Crude & refined oil combined as such. [2] Preliminary. [3] Data prior to 1975–6 are in MILLIONS OF POUNDS. *Source: The Bureau of the Census, U.S.D. of Commerce.*

U.S. Stocks of Soybean Oil (Crude & Refined) at Factory & Warehouses In Millions of Pounds

Year	Oct. 1	Nov. 1	Dec. 1	Jan. 1	Feb. 1	Mar. 1	April 1	May 1	June 1	July 1	Aug. 1	Sept. 1
1969–0	415.4	470.7	492.1	517.2	552.0	558.6	560.7	632.3	715.8	651.3	638.3	670.6
1970–1	543.4	562.3	717.6	755.7	751.7	787.8	756.0	765.8	757.9	719.0	745.3	819.2
1971–2	772.6	725.9	808.6	802.2	782.8	847.1	881.2	952.6	944.9	829.6	854.1	841.6
1972–3	785.2	806.2	839.1	896.5	948.6	966.5	920.6	1,005	778.3	822.7	748.8	620.0
1973–4	515.5	531.6	599.9	690.5	623.3	642.5	626.0	726.3	765.1	708.6	702.7	777.1
1974–5	793.6	734.7	681.5	673.6	689.6	633.8	647.4	662.2	606.7	528.6	544.3	567.1
1975–6	560.5	568.0	657.7	799.9	844.8	913.3	946.0	1,061	1,109	1,275	1,230	1,295
1976–7	1,251	1,351	1,432	1,488	1,606	1,616	1,493	1,485	1,361	1,174	1,037	942.5
1977–8	771.1	756.4	771.1	864.0	913.8	856.5	803.8	822.2	828.7	834.4	820.8	777.5
1978–9[1]	728.6	813.4	837.1	970.6	932.2	942.8	1,004	987.3	1,043	922.9	915.4	815.1
1979–0[1]	775.8	819.8	867.3	1,030	1,155	1,205	1,176	1,184	1,145	1,226	1,305	1,263
1980–1[1]	1,210	1,374	1,677	1,738	1,900	1,976	2,017	2,119	2,166	2,139	2,024	1,783
1981–2[1]	1,736	1,790	1,884	2,024	2,158							
1982–3												

[1] Preliminary. *Source: Bureau of the Census*

U.S. Production of Refined Soybean Oil In Millions of Pounds

Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Total
1969–0	513.0	526.2	560.8	533.0	509.2	566.4	545.9	505.6	531.9	488.1	516.5	491.9	6,289
1970–1	534.5	514.5	538.8	543.5	511.1	557.9	495.0	506.7	526.7	482.9	532.8	568.6	6,313
1971–2	534.5	504.2	534.1	529.7	527.5	564.2	537.9	562.6	537.0	484.7	557.9	530.3	6,364
1972–3	562.9	565.4	560.7	574.6	522.9	579.4	514.7	542.1	516.6	433.2	544.8	504.6	6,373
1973–4	577.1	601.6	597.3	666.4	596.0	616.1	575.0	581.8	542.4	560.5	583.9	510.8	7,009
1974–5	585.0	511.4	482.1	515.0	468.6	497.1	497.0	467.9	489.6	509.3	550.9	538.3	6,112
1975–6	666.9	617.3	605.0	611.9	558.7	646.5	606.6	624.2	627.1	584.7	607.9	568.1	7,325
1976–7	575.4	596.3	578.0	564.4	578.4	710.9	636.9	651.6	589.3	563.9	661.0	623.8	7,330
1977–8	700.1	764.2	745.0	705.6	653.2	801.4	738.0	732.1	649.9	636.8	725.3	679.9	8,532
1978–9[1]	782.8	747.7	765.7	753.3	681.7	768.9	760.1	835.4	742.8	748.3	762.8	693.0	9,043
1979–0[1]	805.9	797.6	760.3	801.9	760.5	767.7	687.1	712.8	669.0	720.3	760.7	764.5	9,038
1980–1[1]	784.1	760.5	763.1	741.6	706.3	833.9	741.2	754.9	812.9	765.4	813.3	812.1	9,289
1981–2[1]	833.6	840.9	805.2	759.5									
1982–3													

[1] Preliminary. *Source: Bureau of the Census*

U.S. Production of Crude Soybean Oil In Millions of Pounds

Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Total
1969–0	660.3	657.6	663.7	664.2	626.5	671.3	672.3	724.1	680.3	664.7	655.6	563.8	7,904
1970–1	729.8	705.6	727.7	724.8	653.2	695.9	695.7	696.4	670.9	674.9	692.2	597.5	8,265
1971–2	645.2	644.2	690.6	689.9	658.9	706.4	646.7	698.8	635.4	648.6	645.7	581.0	7,891
1972–3	713.3	742.4	716.6	723.5	676.8	680.8	618.3	655.8	553.1	470.1	510.5	439.8	7,501
1973–4	676.8	764.9	769.8	797.7	751.5	809.0	750.8	777.8	756.7	788.3	759.0	592.3	8,995
1974–5	672.9	627.5	621.4	651.6	555.9	632.4	600.9	557.6	557.8	623.9	674.5	599.8	7,376
1975–6	783.9	776.7	846.7	807.4	757.6	852.4	846.1	869.8	813.9	788.7	720.5	766.1	9,630
1976–7	807.4	804.0	805.7	786.7	791.2	823.7	747.3	682.4	631.1	566.6	553.6	578.2	8,578
1977–8	821.9	922.3	931.5	911.9	809.5	943.3	866.9	908.2	795.1	777.9	815.8	783.3	10,287
1978–9[1]	984.3	974.8	1,050	989.1	902.3	982.2	939.6	964.7	930.5	899.9	856.7	849.9	11,324
1979–0[1]	1,020	1,068	1,102	1,115	1,065	1,098	993.7	1,010	901.6	927.8	913.8	890.1	12,105
1980–1[1]	1,080	1,078	1,024	1,011	887.8	991.3	954.2	914.9	830.7	815.8	827.2	855.6	11,271
1981–2[1]	1,125	1,018	1,070	995.0									
1982–3													

[1] Preliminary. *Source: Bureau of the Census*

SOYBEAN OIL

U.S. Exports of Soybean Oil (Crude & Refined) In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1969	58.9	19.1	18.6	77.1	43.2	120.3	69.6	20.2	90.9	45.3	100.8	97.2	761.1
1970	62.7	46.2	151.7	73.8	81.1	197.8	136.0	126.7	165.2	103.9	52.7	174.6	1,372
1971	112.0	109.3	156.0	168.0	191.8	140.9	189.0	78.1	122.2	143.0	43.5	153.8	1,612
1972	157.8	71.3	59.3	69.3	89.0	263.3	94.1	57.5	68.3	58.4	109.7	50.7	1,149
1973	52.7	120.9	132.3	49.3	111.8	90.3	81.5	37.0	45.2	12.9	31.7	108.6	874.3
1974	122.2	120.2	98.3	146.0	96.9	226.6	239.0	84.1	83.2	85.9	111.1	193.0	1,067
1975	129.0	71.6	116.1	57.6	72.9	55.7	65.3	13.1	13.5	43.8	78.9	40.4	758.0
1976	32.6	120.2	89.6	55.5	160.9	74.4	77.6	41.8	151.5	100.8	107.7	75.8	1,088
1977	103.7	92.3	236.4	103.3	209.4	159.9	154.2	72.0	66.0	108.8	185.5	175.3	1,667
1978	113.1	141.8	252.6	218.9	176.4	147.2	165.5	108.8	193.4	96.8	154.8	175.4	1,945
1979[1]	219.1	249.8	199.0	185.6	107.3	299.0	166.2	187.4	159.1	127.8	208.5	261.9	2,371
1980[1]	173.4	250.0	325.4	269.6	327.3	194.6	109.7	175.7	171.2	112.5	84.7	120.5	2,315
1981[1]	116.0	113.8	202.8	76.1	109.6	108.8	93.1	291.7	97.9	174.3	135.1	179.0	1,698
1982[1]	31.8												

[1] Preliminary. *Source: Dept. of Commerce*

Average Prices of Crude Domestic Soybean Oil (in Tank Cars) F.O.B. Decatur In Cents per Pound

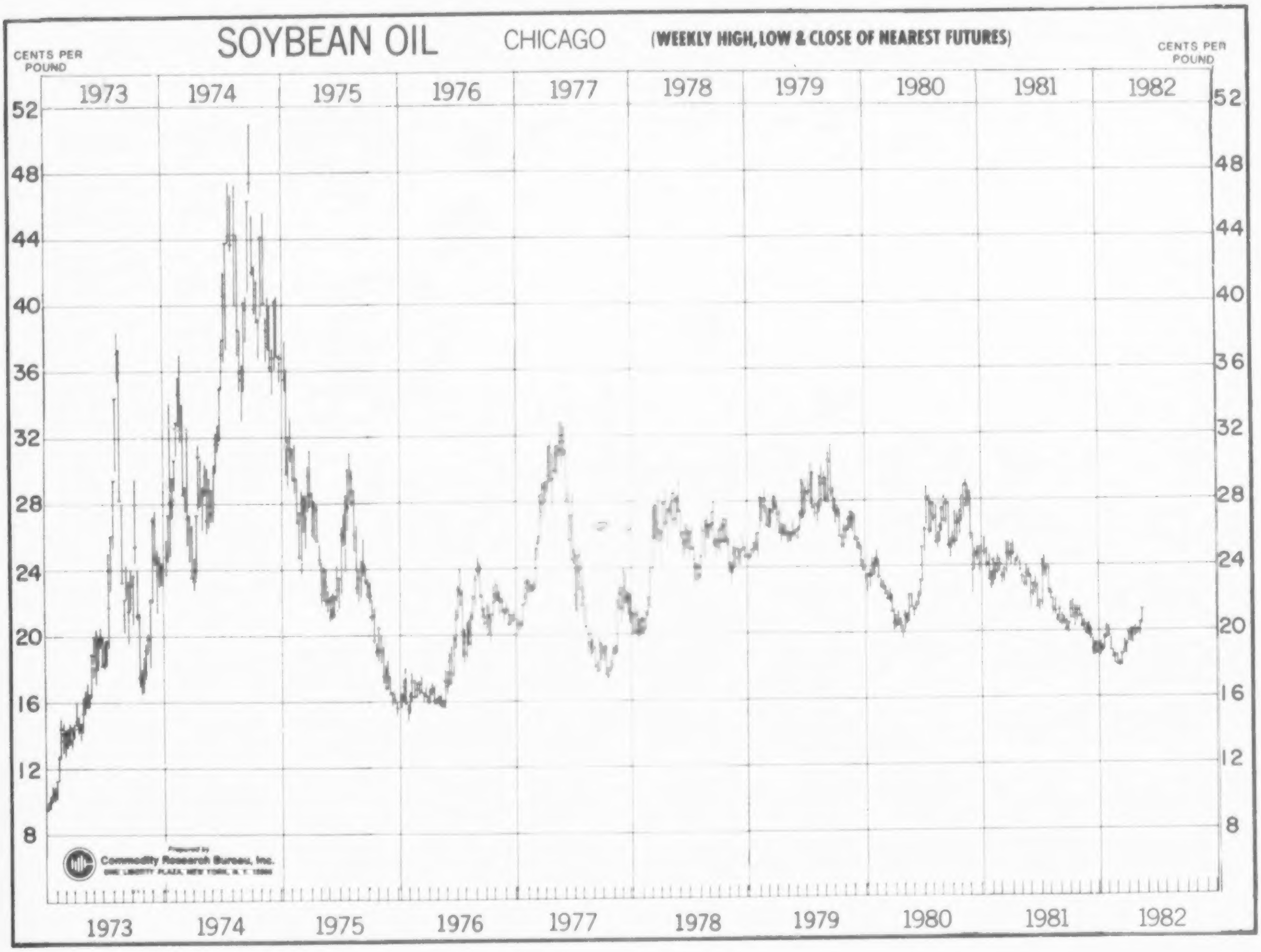
Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Average
1969–0	10.6	10.9	9.6	9.6	11.5	12.2	12.2	11.3	11.1	11.5	11.6	12.1	11.2
1970–1	14.0	13.9	12.4	12.3	12.1	12.2	11.2	11.4	12.8	14.5	14.5	12.8	12.8
1971–2	13.2	12.5	11.7	10.9	11.0	11.7	11.9	11.4	10.7	10.3	10.1	9.8	11.3
1972–3	9.6	9.6	9.7	10.1	13.0	13.9	15.0	17.1	19.3	22.4	33.5	24.3	16.5
1973–4	23.1	20.4	26.0	28.6	36.4	30.2	28.2	29.4	31.6	40.5	43.3	40.7	31.5
1974–5	42.3	40.4	38.0	33.6	29.4	29.1	28.2	23.6	23.3	27.5	28.5	24.4	30.7
1975–6	21.4	18.9	16.8	16.2	16.3	16.6	16.3	15.8	17.6	20.9	20.4	22.5	18.3
1976–7	20.7	21.8	21.0	20.9	22.4	26.5	29.6	31.3	28.3	23.8	21.1	19.2	23.9
1977–8	18.8	21.0	22.6	20.9	21.6	26.6	26.8	28.8	26.9	25.9	26.3	27.8	24.5
1978–9	26.7	23.7	25.8	25.8	27.3	26.9	26.7	27.8	27.4	29.1	29.2	30.0	27.2
1979–0	27.9	27.8	26.2	23.6	23.4	22.1	20.3	20.8	21.6	26.2	25.9	26.1	24.3
1980–1	25.1	26.7	23.7	23.0	22.0	23.1	23.4	21.6	21.3	22.8	20.8	19.4	22.7
1981–2	19.7	19.9	18.9	18.4	18.2	18.5							
1982–3													

Source: Bureau of Labor Statistics

Average Price of Refined (in Tanks) Soybean Oil at New York In Cents per Pound

Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Average
1969–0	12.4	12.7	11.6	11.6	13.6	14.0	13.9	13.3	13.0	13.4	13.5	13.8	13.1
1970–1	15.9	16.0	14.2	14.3	14.2	14.3	13.2	13.0	14.2	16.0	16.0	14.5	14.7
1971–2	14.6	14.1	12.8	12.4	12.5	13.0	13.6	13.0	12.3	11.7	11.4	11.4	12.7
1972–3	11.1	11.2	11.1	11.5	14.2	15.5	16.8	18.3	20.5	21.7	34.5	25.7	17.7
1973–4	25.7	22.1	27.8	29.1	36.7	33.1	29.7	31.0	33.1	40.9	45.1	41.9	33.0
1974–5	45.3	41.5	39.7	35.0	30.4	30.9	29.8	25.2	25.4	31.1	32.5	29.7	33.0
1975–6	26.8	24.1	22.2	21.3	21.2	21.9	21.5	21.4	22.4	25.7	25.5	28.4	23.6
1976–7	26.8	27.0	26.1	26.0	27.8	31.1	34.3	36.8	33.7	28.8	26.9	24.6	29.2
1977–8	24.2	25.9	27.8	26.1	26.8	31.7	32.5	34.2	31.8	31.3	31.0	32.7	29.7
1978–9	32.1	33.5	33.0	30.8	32.7	33.0	31.8	31.6	32.7	34.3	34.7	35.0	32.9
1979–0	32.6	32.6	30.9	28.2	28.9	27.4	25.4	25.6	26.2	31.9	31.8	32.0	29.5
1980–1	30.2	30.9	28.6	28.2	26.5	28.1	28.5	26.5	26.8	29.2	26.6	24.9	27.9
1981–2	26.0	25.3	24.1	23.5									
1982–3													

Source: Bureau of Labor Statistics



High, Low & Closing Prices of May Soybean Oil Futures on the Chicago Board of Trade ¢ per lb.

Year of Delivery		Year Prior to Delivery										Delivery Year					Life of Delivery Range
		Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	
1978	High	26.20	27.35	27.90	28.35	23.32	20.95	20.39	20.10	21.75	22.40	21.88	22.15	28.25	28.65	28.80	28.80
	Low	24.50	25.20	25.60	22.90	20.35	18.35	18.05	18.00	18.65	20.40	19.82	20.02	22.25	24.15	26.30	18.00
	Close	26.00	26.55	27.90	24.32	20.70	18.50	19.82	18.92	20.45	21.05	20.36	22.13	26.15	27.47	27.97	—
1979	High	22.13	23.70	25.12	24.95	22.45	24.05	25.15	26.35	25.80	25.70	25.97	28.85	28.30	27.85	26.45	28.85
	Low	21.40	20.90	21.50	21.35	20.95	21.10	23.10	23.92	23.55	23.92	24.28	25.31	26.35	25.50	25.27	20.90
	Close	21.75	21.58	25.00	22.30	22.13	22.90	24.10	25.90	24.65	24.67	25.37	27.53	27.57	26.00	25.85	—
1980	High	25.70	25.74	26.45	29.20	28.45	27.35	28.25	27.25	26.50	26.15	24.80	25.37	23.54	21.19	21.20	29.20
	Low	24.70	24.55	25.25	25.95	25.80	25.35	25.55	25.05	25.16	24.60	23.45	23.21	20.72	19.53	19.75	19.53
	Close	25.25	25.37	26.22	26.60	26.05	26.40	26.68	25.58	25.88	24.62	24.63	23.32	20.74	19.86	20.90	—
1981	High	26.15	24.00	24.05	25.65	29.40	28.55	29.70	29.20	31.45	30.75	27.35	25.55	25.40	25.51	24.05	31.45
	Low	23.60	22.35	22.35	22.80	25.45	26.50	26.80	26.81	28.25	24.25	23.40	23.60	23.50	23.60	22.61	22.35
	Close	23.60	22.37	23.38	25.62	28.30	28.05	27.21	28.28	30.70	26.00	23.57	24.84	25.15	23.84	22.85	—
1982	High	28.60	29.02	28.10	26.50	27.90	25.90	24.50	24.25	23.25	21.85	21.01	21.08	19.45	20.25		
	Low	27.13	27.75	26.30	24.70	24.85	23.50	22.52	22.45	21.20	19.65	19.70	18.72	18.26	18.88		
	Close	28.60	27.75	26.35	25.02	25.90	23.60	22.87	23.00	21.21	19.76	20.88	19.13	18.88	19.83		
1983	High	—	—														
	Low	—	—														
	Close	—	—														

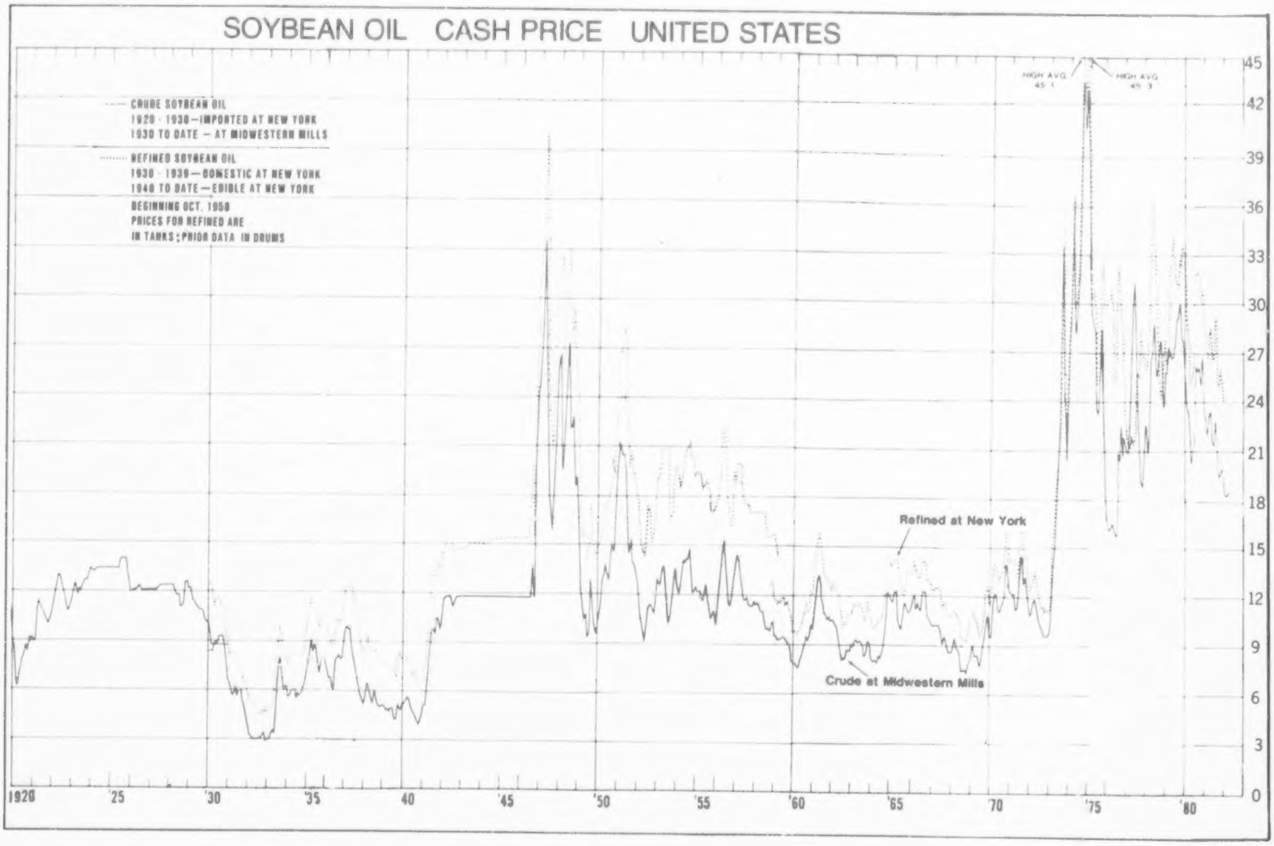
Source: Chicago Board of Trade

SOYBEAN OIL

Supply & Distribution of Soybean Oil in the U.S. In Millions of Pounds

				Domestic Disappearance											
					Food					Non-Food					
Year Begin. Oct.	Production	Stocks Oct. 1	Exports & Shipments	Total	Shortening	Margarine	Cooking & Salad Oils	Other Edible	Total Food	Paint & Varnish	Resins & Plastics	Fatty Acids	Other Inedible	Foots & Loss	Total Non-Food
1969–0	7,904	415	1,448	6,328	2,255	1,415	2,150	37	5,857	94	79	1	54	243	471
1970–1	8,265	543	1,782	6,253	2,077	1,381	2,288	34	5,780	82	65	3	56	267	472
1971–2	7,892	773	1,440	6,440	2,089	1,413	2,469	48	6,009	81	55	6	38	251	431
1972–3	7,501	785	1,086	6,685	2,230	1,491	2,469	39	6,229	81	57	9	40	270	456
1973–4	8,995	516	1,461	7,256	2,321	1,513	2,884	30	6,748	91	77	12	48	280	508
1974–5	7,375	794	1,090	6,518	1,882	1,486	2,680	22	6,070	82	58	16	31	260	448
1975–6	9,630	561	1,034	7,906	2,416	1,691	3,274	24	7,405	94	96	23	25	294	501
1976–7	8,578	1,251	1,607	7,454	2,189	1,568	3,165	25	6,947	85	83	26	36	278	507
1977–8[1]	10,288	771	2,137	8,273	2,433	1,592	3,568	29	7,621	87	79	42	33	308	549
1978–9[1]	11,323	729	2,411	8,942	2,479	1,593	3,825								
1979–0[1]	12,105	776	2,741	8,981	2,680	1,643	4,060								
1980–1[2]	11,270	1,210	1,629	9,115	2,660	1,651	4,041								
1981–2[2]	11,554	1,736	2,200	9,450											
1982–3															

[1] Preliminary. [2] Forecast. *Source: Economic Research Service, U.S.D.A.*



Soybean Oil Consumption in End Products in the U.S. In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1969	489.0	429.2	478.8	464.5	485.4	517.2	457.7	480.8	513.5	552.5	527.7	551.9	5,948
1970	531.0	523.3	554.7	526.1	491.0	549.5	488.3	513.7	524.3	548 2	519.9	552.3	6,322
1971	534.7	505.8	535.0	497.9	505.6	556.3	497.3	537.3	554.0	522.0	522.2	554.8	6,323
1972	557.4	535.3	592.2	553.5	589.0	572.6	506.5	578.4	562.8	594.7	590.7	594.1	6,827
1973	595.8	546.3	599.0	529.6	592.5	542.6	471.7	580.8	530.3	621.0	629.2	591.9	6,831
1974	673.7	599.8	644.9	583.4	585.0	571.3	597.0	569.2	524.4	621.8	552.1	516.4	7,039
1975	553.4	521.2	528.2	540.3	527.4	531.3	555.3	562.8	604.8	672.0	609.2	624.4	6,830
1976	658.0	617.6	687.3	623.4	625.9	634.6	626.8	635.1	623.7	621.3	609.1	613.8	7,577
1977	571.5	591.2	694.5	597.1	611.0	553.8	517.9	629.8	621.5	658.6	682.3	721.9	7,451
1978	664.1	648.8	771.7	686.5	662.4	640.5	596.2	699.8	672.5	715.9	709.3	707.5	8,175
1979[1]	695.1	636.2	755.3	682.4	775.0	701.6	711.4	744.8	700.9	781.4	742.2	730.1	8,656
1980[1]	750.7	719.4	762.9	671.6	693.6	683.7	671.2	754.5	737.1	719.1	682.6	738.8	8,585
1981[1]	697.8	680.8	775.1	722.3	728.7	774.1	763.1	755.2	796.4	796.8	783.5	749.4	9,024
1982[1]	732.8												
1983													

[1] Preliminary. *Source: Bureau of the Census*

Month End Open Interest of Soybean Oil Futures of the Chicago Board of Trade In Contracts

Year	Jan.	Feb.	Mar.	Apr	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	40,175	44,145	49,994	49,592	55,292	52,682	52,230	49,553	50,322	60,842	57,363	54,133
1979	50,713	57,729	57,893	55,657	57,820	64,671	58,852	58,258	60,854	67,778	65,893	64,374
1980	62,515	63,472	59,707	52,805	61,089	65,949	64,710	63,908	66,723	75,815	91,407	71,527
1981	58,671	65,580	57,956	67,241	56,968	63,400	54,007	56,847	49,411	50,786	54,232	48,295
1982	53,029	53,375	49,824	53,395								
1983												

Source: Chicago Board of Trade

Volume of Trading of Soybean Oil Futures at the Chicago Board of Trade In Thousands of Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	209.5	183.4	312.7	266.8	258.1	278.6	215.2	236.3	204.3	285.4	257.3	201.7	2,909
1979	215.0	291.5	233.8	254.4	212.3	321.7	313.0	252.5	262.0	311.6	222.3	191.6	3,082
1980	200.7	210.3	177.1	185.0	198.2	216.9	361.8	284.8	329.9	332.6	327.0	343.7	3,168
1981	243.8	231.1	237.9	254.0	221.7	274.8	355.1	233.7	240.2	235.0	228.1	292.1	3,047
1982	219.1	245.6	239.8	272.2									
1983													

Source: Chicago Board of Trade

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Soybeans

U.S. soybean supplies in the 1981/82 marketing year, ending August 31, 1982 totaled 2.35 billion bushels, the second largest ever. Production for the same period totaled 2.03 billion bushels. A return to a more normal relationship between planted and harvested acreage in 1981 than in 1980, combined with a 4-bushel jump in the average yield, produced a crop second only to the 2.3 billion bushels in 1979/80.

Soybean crushings for the 1981/82 season were projected by the USDA at 1.06 billion bushels, approximately 4 percent above the 1980/81 level. Crush margins remained unfavorable throughout most of calendar year 1981, with prices for both soybean products adversely affected by the weak U.S. and world economies. U.S. soybean disappearance was expected to rebound from 1980/81's low levels, possibly up 9 percent to 1.99 billion bushels. Demand for soybeans for domestic crush depends primarily on domestic demand for products, mainly soybean meal. Crush demand is reflected by crushing margins—the difference between the value of the products from a bushel of soybeans and soybean prices per bushel. While soybean prices dropped, product demand was not strong enough to improve margins. Generally, margins were squeezed by declining product prices. Average monthly margins during September-December 1981 were mostly below those of the same period in the previous season. Intermittently, there were some spot margins in the mid-30-cents-a-bushel range. However, some forward margins in the upper 30's to low 40's allowed some crushers to lock in only moderate margins. Crush during September-December 1981 ran about 2 percent above that of the previous season.

U.S. soybean crush in 1982/83 was expected to exceed the 1981/82 season's 1.06 billion bushel level. Crushing margins were expected to show some improvements—reflecting stronger domestic demand for meal and oil due to expected improvement in U.S. economic conditions.

Soybean exports in 1981/82 were forecast to reach 840 million bushels, up 116 million compared to last season. The projected rise was primarily based on expectations of a 16-percent increase in EEC imports. If realized, the structure of trade would return to an historically more normal soybean/soybean meal import mix compared with the previous season, when EEC soybean imports dropped 50 million bushels, while soybean meal rose nearly 300,000 short tons.

Unlike crushing margins in the United States, EEC crushing margins soared last fall. Although prices throughout the soybean complex declined, soybean prices since August 1981 declined by 11 percent while total product value declined only by 5 percent. The variable levy in the EEC, which supports the price of corn, kept corn prices high relative to meal in 1981. This factor tends to maintain meal use, and support meal prices, thus aiding crushing margins.

As of January 21, 1982, EEC soybean imports from the United States were 55 percent above a year ago. However, this pace was not expected to continue. It was generally believed that European crushers were maintaining a "wait and see" attitude in light of continued high interest rates, and an uncertain economic outlook in Europe—two key factors likely to influence soybean demand into 1982.

If the early 1982 estimates of U.S. soybean supply and disappearance were realized, ending stocks on September 1, 1982, could match the 1979/80 record of almost 360 million bushels.

In light of the 1981/82 increase in supply relative to prospective demand, farm prices for soybeans were forecast to average considerably lower than in the last year. Although prices through November 1981 were below this estimate, they normally increase later in the crop year. Monthly low prices most often occur in the first quarter, while high prices usually show up in the last quarter.

World 1981/82 soybean production was forecast at 89 million tonnes, almost 8 million above 1980/81.

Government Support Program

The national average loan rate for 1982 crop soybeans was established by the USDA at $5.02 per bushel (No. 1 grade; 12.8–13.0 percent moisture), unchanged from 1981. Loans mature nine months after the date of loan approval.

Futures Markets

Soybean futures in the U.S. are currently traded on the Chicago Board of Trade and on the MidAmerica Commodity Exchange in Chicago.

World Production of Soybeans In Thousands of Metric Tons

Year of Harvest*	Argentina	Brazil	Canada	China[2]	Colombia	Indonesia	Japan	Korea, South	Mexico	Romania	Paraguay	Thailand	United States	U.S.S.R.	World Total
1970	27	1,509	283	6,200	95	498	126	232	240	91		70	30,839	603	41,811
1971	59	2,077	280	6,900	106	475	122	222	250	165		67	30,675	535	43,556
1972	78	3,666	375	6,500	122	516	127	224	375	186		80	34,581	258	47,646
1973	496	7,876	397	10,000	114	541	118	246	510	244		115	42,117	424	63,912
1974	485	9,892	301	9,500	114	589	133	319	420	298		114	33,102	360	56,513
1975	695	10,810	367	10,000	169	590	126	311	625	213		121	42,113	780	67,914
1976	1,400	12,200	250	9,000	75	590	126	311	280	213		121	35,042	480	59,288
1977	2,700	9,534	527	7,300	135	523	111	319	470	191	333	90	47,947	540	72,157
1978	3,700	10,326	516	7,600	137	674	190	320	330	230	549	94	50,898	639	77,364
1979[1]	3,650	15,140	671	7,460	146	650	192	330	680	376	575	95	61,722	467	93,621
1980[1]	3,500	15,500	713	7,880	155	660	174	330	280	330	600	100	48,772	540	80,929
1981[3]	4,300	14,200		8,100							625		55,260		87,628

[1] Preliminary. [2] Mainland. [3] Projected. * Split year includes Northern Hemisphere crops harvested in the late months of the first year shown combined with Southern Hemisphere crops harvested in the early months of the following year.
Source: Foreign Agricultural Service, U.S.D.A.

U.S. Soybean Price Support Program & Official Crop Production Reports In Millions of Bushels

Year	Quantity Put Under Support	Deliveries to C.C.C.	Sept. 1 Stocks		National Avg. Support		(In Thousands of Bushels) Crop Production Reports					
			Total	Gov't. Owned	% of Parity	$ Per Bu.	August 1	September 1	October 1	November 1	December 1	Final
1969	179.5	.2	326.8	336.8	62	2.25	1,060,859	1,054,722	1,070,182	1,094,466	1,116,876	1,133,120
1970	146.4	[2]	229.8	196.9	60	2.25	1,113,566	1,133,193	1,134,595	1,134,151	1,135,769	1,127,100
1971	168.2	[2]	98.8	11.4	56	2.25	1,235,451	1,186,301	1,175,447	1,200,201	1,169,361	1,176,101
1972	90.6	[2]	72.0	1.5	54	2.25	1,269,616	1,286,015	1,317,090	1,350,517	1,276,290	1,270,608
1973	124.2	[2]	59.6	—	45	2.25	1,539,771	1,598,746	1,588,361	1,574,586	1,566,518	1,547,543
1974	34.6	—	170.8	—	37	2.25	1,314,232	1,315,792	1,262,352	1,243,912	1,233,425	1,216,287
1975	—	—	188.2	.4	—None—		1,457,672	1,442,422	1,473,782	1,519,882	1,521,370	1,548,344
1976	22.5	—	244.9	—	34	2.50	1,344,343	1,274,263	1,249,713	1,252,148	1,287,560	1,288,608
1977	97.5	—	102.9	—	46	3.50	1,602,065	1,644,220	1,647,315	1,682,705	1,761,755	1,767,267
1978	64.2	—	161.0	—	51	4.50	1,765,024	1,772,364	1,792,064	1,810,389	1,870,181	1,868,754
1979	120.0	—	174.1	—	45	4.50	2,129,254	2,174,179	2,213,289	2,235,869	2,267,647	2,267,901
1980[1]	—	—	358.8	—	38	5.02	1,880,342	1,831,172	1,757,272	1,774,742	1,817,097	1,792,062
1981[1]	—	—	318.3	—		5.02	2,017,468	2,089,418	2,106,568	2,076,998	2,030,452	
1982						5.02						

[1] Preliminary. [2] Less than 50,000 bushels. *Source: Crop Reporting Board, U.S.D.A.*

Soybean Stocks in the United States In Thousands of Bushels

Year	On Farms				Off Farms				Total Stocks			
	Jan. 1	April 1	June 1[2]	Sept. 1	Jan. 1	April 1	June 1[2]	Sept. 1	Jan. 1	April 1	June 1[2]	Sept. 1
1969	410,168	276,930	141,360	70,551	550,329	452,343	316,815	254,992	960,497	729,300	458,175	325,543
1970	372,069	209,236	78,711	40,580	683,425	525,001	324,676	189,256	1,055,494	734,237	403,387	229,836
1971	391,960	246,491	90,595	20,554	553,012	369,063	190,832	78,225	944,972	615,554	281,427	98,779
1972	397,605	218,609	58,438	11,779	491,387	333,677	174,394	60,183	888,992	552,286	232,832	71,962
1973	429,071	145,333	33,855	9,415	437,924	358,372	145,352	50,222	866,995	503,705	179,207	59,637
1974	608,160	331,885	151,104	64,545	552,756	405,943	190,865	106,337	1,160,916	737,828	341,969	170,882
1975	483,869	331,241	165,324	75,114	505,392	323,317	191,704	109,922	989,261	654,558	357,028	185,036
1976	590,466	411,366	253,963	86,150	665,689	456,283	300,938	158,781	1,256,155	867,649	554,901	244,931
1977	473,120	227,723	92,374	32,748	559,045	390,214	213,335	70,168	1,032,165	617,937	335,709	102,916
1978	672,861	393,684	207,102	59,000	652,400	455,448	298,815	102,044	1,325,261	849,132	505,917	161,044
1979	699,556	412,570	241,255	61,509	692,534	467,646	284,850	112,579	1,392,090	880,216	526,105	174,088
1980	892,934	602,779	396,650	128,888	877,896	580,322	378,152	229,880	1,770,830	1,183,101	774,802	358,768
1981[1]	730,157	533,082	362,266	159,029	790,300	496,619	317,156	159,276	1,520,457	1,029,701	679,422	318,305
1982[1]	901,145	591,073			743,188	459,371			1,644,333	1,050,444		
1983												

[1] Preliminary. [2] Data prior to 1976 are AS OF JULY 1. *Source: Crop Reporting Board, U.S.D.A.*

U.S. Commercial Stocks of Soybeans on the First of the Month In Millions of Bushels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1969	45.6	46.9	51.1	50.7	48.2	39.1	35.9	31.9	32.7	34.1	60.2	80.2
1970	79.4	84.8	82.5	82.3	72.4	59.0	43.8	8.7	34.3	17.8	30.1	40.7
1971	47.2	51.4	54.4	57.1	54.2	41.6	35.0	36.5	17.3	12.1	48.5	48.8
1972	41.8	37.7	41.1	49.0	48.4	36.1	27.1	18.8	13.6	7.0	25.0	32.0
1973	39.1	32.0	56.8	59.7	48.9	31.8	22.8	16.6	12.1	10.5	30.4	35.6
1974	33.6	32.0	35.3	36.2	27.3	21.2	21.2	20.3	18.0	14.3	51.6	55.4
1975	48.1	43.3	40.5	31.1	18.0	12.8	16.6	13.0	12.6	14.2	60.2	62.5
1976	52.0	55.7	57.1	51.7	42.5	37.0	32.5	30.4	21.3	27.9	54.4	52.2
1977	46.8	49.5	51.1	52.3	55.4	50.0	38.7	19.6	8.5	10.9	43.6	50.9
1978	46.2	44.3	41.8	49.1	47.9	42.7	30.6	23.0	10.7	13.0	58.3	63.2
1979	60.9	57.6	62.0	60.8	52.5	40.7	37.6	31.2	19.3	11.5	77.6	84.9
1980	76.5	71.5	73.2	72.3	56.5	52.6	53.2	51.8	44.8	51.5	80.6	79.5
1981	73.1	71.1	69.0	53.1	45.3	36.2	24.7	19.0	11.2	12.6	40.7	59.4
1982	50.6	50.4	41.1	39.9	34.7							

Source: Foreign Agricultural Service, U.S.D.A.

SOYBEANS

Salient Statistics of Soybeans in the United States

Crop Year	Planted Alone	Acreage Harvested	Yield Per Acre (Bus.)	Farm Price ($ Bu.)	Farm Value (Million Dollars)	Pounds Per Bushel Crushed		U.S. Exports of Soybeans Crop Year (Sept.-Aug.) (Ths. Metric Tons[2])								
	1,000 Acres					Yield of Oil	Yield of Meal	Grand Total	Bel.-Luxem.	Denmark	Canada	W. Germany	Japan	Netherlands	Taiwan	U.S.S.R.
1969–0	42,534	41,337	27.4	2.35	2,664	10.66	47.36	432.6	16.1	18.4	70.0	41.8	101.4	57.4	21.2	—
1970–1	43,802	42,249	26.7	2.85	3,215	10.83	47.39	433.8	13.2	21.4	42.2	53.0	102.8	57.9	19.6	—
1971–2	43,472	42,705	27.5	3.03	3,560	10.98	47.43	416.8	5.7	16.2	31.3	52.0	107.4	64.1	23.9	0
1972–3	46,885	45,683	27.8	4.37	5,550	10.59	47.04	479.4	8.2	17.4	22.1	54.7	121.0	84.3	19.6	31.5
1973–4	56,675	55,667	27.8	5.68	8,790	10.76	47.18	539.1	13.2	12.5	37.9	72.9	98.8	101.1	20.5	.7
1974–5	53,507	51,341	23.7	6.64	8,079	10.51	47.48	420.7	5.6	5.9	26.9	51.0	96.9	77.7	24.4	0
1975–6	54,550	53,617	28.9	4.92	7,622	10.94	47.27	555.1	17.7	15.1	28.0	45.6	118.1	130.5	32.8	11.4
1976–7	50,226	49,401	26.1	6.81	8,776	11.09	47.81	15,351	411	306	462	1,520	3,219	3,007	697	825
1977–8	58,760	57,830	30.6	5.88	10,383	10.89	47.34	19,061	475	423	264	1,521	3,636	4,086	854	744
1978–9	64,708	63,663	29.4	6.66	12,450	11.07	47.63	20,117	420	341	352	1,486	3,865	4,012	1,271	1,178
1979–0	71,632	70,566	32.1	6.28	14,250	10.76	48.01	23,818	584	342	392	1,318	3,868	6,035	780	813
1980–1[1]	70,037	67,856	26.4	7.57	13,566	11.09	47.93	19,712	670	156	345	1,791	3,816	3,839	1,063	—
1981–2[1]	68,000	66,688	30.4	6.25	12,691			22,861								
1982–3[1]	69,535															

[1] Preliminary. [2] Data prior to 1976–7 are in MILLIONS OF BUSHELS. *Source: Crop Reporting Board, U.S.D.A.*

Supply and Distribution of Soybeans in the United States In Millions of Bushels

Crop Year Begin. Sept. 1	Supply						Distribution					
	Stocks, Sept. 1											
	Farms	CCC	Mills, Elevators[2]	Total	Production	Total Supply	Crushings	Exports	Seed	Feed	Residual	Total Distribution
1969–0	70.6	5.3	247.3	326.8	1,133.1	1,459.9	737.3	432.6	48.5	.9	10.8	1,230.1
1970–1	40.6	8.7	180.5	229.8	1,127.1	1,356.9	760.1	433.8	48.1	1.1	15.1	1,258.2
1971–2	20.6	—	78.2	98.8	1,176.1	1,274.9	720.5	416.8	51.0	1.1	13.5	1,202.9
1972–3	11.8	0	60.2	72.0	1,270.6	1,342.6	721.8	479.4	60.8	1.1	19.8	1,282.9
1973–4	9.4	0	50.2	59.6	1,547.5	1,607.1	821.3	539.1	56.1	1.2	18.7	1,436.4
1974–5	64.5	0	106.3	170.9	1,216.3	1,387.2	701.3	420.7	57.2	1.0	21.7	1,198.9
1975–6	75.1	0	109.9	188.2	1,548.3	1,736.5	865.1	555.1	53.5	1.2	15.7	1,490.6
1976–7	86.2	0	158.8	244.9	1,288.6	1,533.5	790.2	564.1	61.0	1.0	13.3	1,429.6
1977–8	32.7	0	70.2	102.9	1,767.3	1,870.2	926.7	700.5	68.0	1.0	13.0	1,703.6
1978–9	59.0	0	102.0	161.0	1,868.8	2,029.8	1,018	739.0	75.0	1.0	23.0	1,857.8
1979–0	61.5	0	112.6	174.1	2,267.9	2,442.0	1,123	875.0	67.0	1.0	17.0	2,083.0
1980–1[1]	128.9	0	229.9	358.8	1,792.1	2,350.0	1,020	724.0	66		23.0	1,833.0
1981–2[3]	160.8	0	159.3	320.0	2,030.5	2,350.5	1,055	870	68		20.0	2,013.0
1982–3												

[1] Preliminary. [2] Also warehouses. [3] Estimates. *Source: Economic Research Service, U.S.D.A.*

Production of Soybeans for Beans in the U.S., by Selected States In Millions of Bushels

Year	Ark.	So. Car.	Ill.	Ind.	Iowa	La.	Mich.	Minn.	Miss.	Mo.	N. Car.	Ohio	Tenn.	Nebr.	Ky.
1969	92.4	22.5	228.8	106.0	177.1	33.0	11.6	75.0	50.7	80.3	23.0	73.0	29.0	24.9	12.6
1970	99.0	20.2	210.8	101.6	184.6	40.5	13.3	78.8	58.1	88.4	20.8	72.7	26.5	17.9	14.3
1971	92.5	23.0	236.0	111.4	178.8	39.5	10.3	63.9	56.6	97.3	23.8	80.3	31.7	15.2	20.8
1972	81.0	20.0	259.4	108.8	216.0	38.3	13.6	90.3	48.0	108.9	29.1	79.8	28.6	23.0	23.6
1973	116.3	23.0	281.3	135.1	263.5	34.8	16.6	127.3	60.5	126.9	34.8	89.8	36.9	36.3	26.0
1974	81.7	24.0	202.6	97.3	199.1	44.0	13.2	84.0	46.3	93.5	30.5	79.8	31.9	28.2	25.0
1975	117.5	30.4	299.5	121.6	237.0	48.0	15.9	98.6	70.2	113.6	33.4	102.3	46.3	32.4	29.7
1976	82.1	21.4	249.5	111.5	200.0	63.0	11.6	66.4	71.5	84.0	24.6	95.0	40.5	19.6	28.9
1977	105.8	26.7	336.3	144.3	251.3	63.0	21.6	133.8	78.5	148.8	29.0	120.0	52.2	40.7	40.9
1978	115.2	32.3	309.5	144.2	283.1	76.0	21.6	146.2	81.7	155.0	40.3	127.7	56.9	42.5	40.8
1979	144.2	39.8	379.1	159.1	306.4	93.8	30.3	162.6	118.9	183.6	45.8	144.8	70.7	54.7	54.0
1981	65.3	20.8	309.9	157.7	318.4	67.0	30.4	149.9	61.6	135.5	34.7	135.4	45.9	53.1	36.0
1982[1]	99.0	32.6	354.5	151.8	330.1	65.7	29.1	145.2	75.6	159.1	47.0	99.8	61.1	82.7	50.2
1983															

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

High, Low & Closing Prices of May Soybean Futures at the Chicago Board of Trade In Cents per Bushel

Year of Delivery		Year Prior to Delivery										Delivery Year					Life of Delivery Range
		Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	
1979	High	648	659	695	691	639	673½	697	753	736	727	733	797	785	755½	738½	797
	Low	614½	608½	619	620¼	606	606	646½	674	669	681	685	714	738	714	705¼	606
	Close	632	625½	690¼	645¼	625½	657	672¼	736½	697½	700¾	718¾	766	771¼	717	723½	—
1980	High	744½	747	760	859	823	773	790	788	739½	726½	704	710½	669½	611	624	859
	Low	735	719½	734	749	730½	720	729½	695	702	686½	653	656½	582½	569½	589½	569½
	Close	737½	739¾	756	764	738¾	757¾	762½	709¾	723¼	687¼	695½	657½	583	594½	612	—
1981	High	741½	713½	710	750	859	855½	933	997½	1,006	1,001	882	798½	788½	812½	785	1,006
	Low	696½	681	684	680	744	783	842	847½	937	765½	735	754½	719½	757½	733	680
	Close	699	692	695¾	750	822	854½	873¼	966½	997½	843½	751½	761	783½	778½	741	—
1982	High	894	922	883	832½	853½	807	751	739	721	696¼	677	683	642	670¾		
	Low	859	872	820	772	787	722	703½	705	670	619	637	617½	605½	639½		
	Close	888½	873	829	788½	812½	730	715¼	714¼	678¼	641¼	674½	632¾	640	651¾		
1983	High	713	729½														
	Low	667½	698														
	Close	696	716½														

Source: Chicago Board of Trade

Soybean Stocks at U.S. Mills on First of Month In Thousands of Short tons[1]

Crop Year	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
1972–3	38.1	12.3	91.3	111.1	117.4	136.6	133.3	124.0	107.9	88.5	68.2	58.5
1973–4	30.7	13.5	89.5	125.8	115.8	119.0	123.0	112.3	95.5	81.5	66.5	57.0
1974–5	41.6	23.0	93.9	123.0	102.5	83.2	79.2	65.3	55.4	44.3	37.7	35.4
1975–6	27.4	26.8	116.6	137.2	131.5	121.1	109.8	101.3	92.8	79.4	80.5	66.3
1976–7	48.7	63.0	127.5	159.8	154.2	147.5	146.5	140.3	126.8	108.6	83.4	50.9
1977–8[1]	23.4	20.3	3,045[1]	3,716	3,390	2,832	2,620	3,085	2,705	2,291	1,724	1,339
1978–9	1,136	957	4,153	4,480	3,820	3,371	3,722	3,626	2,902	2,133	2,190	1,668
1979–0	1,124	1,176	4,996	5,536	4,899	4,363	3,931	3,559	2,874	2,392	2,272	2,218
1980–1	1,706	2,412	4,981	5,159	4,162	3,777	3,162	2,917	2,533	2,035	1,475	1,316
1981–2	1,002	946	3,173	4,053	3,436	2,993						

[1] Data prior to Nov. 1977 are in MILLIONS OF BUSHELS. *Source: Economic Research Service, U.S.D.A.; Bureau of the Census*

Soybean Exports from the United States In Millions of Bushels

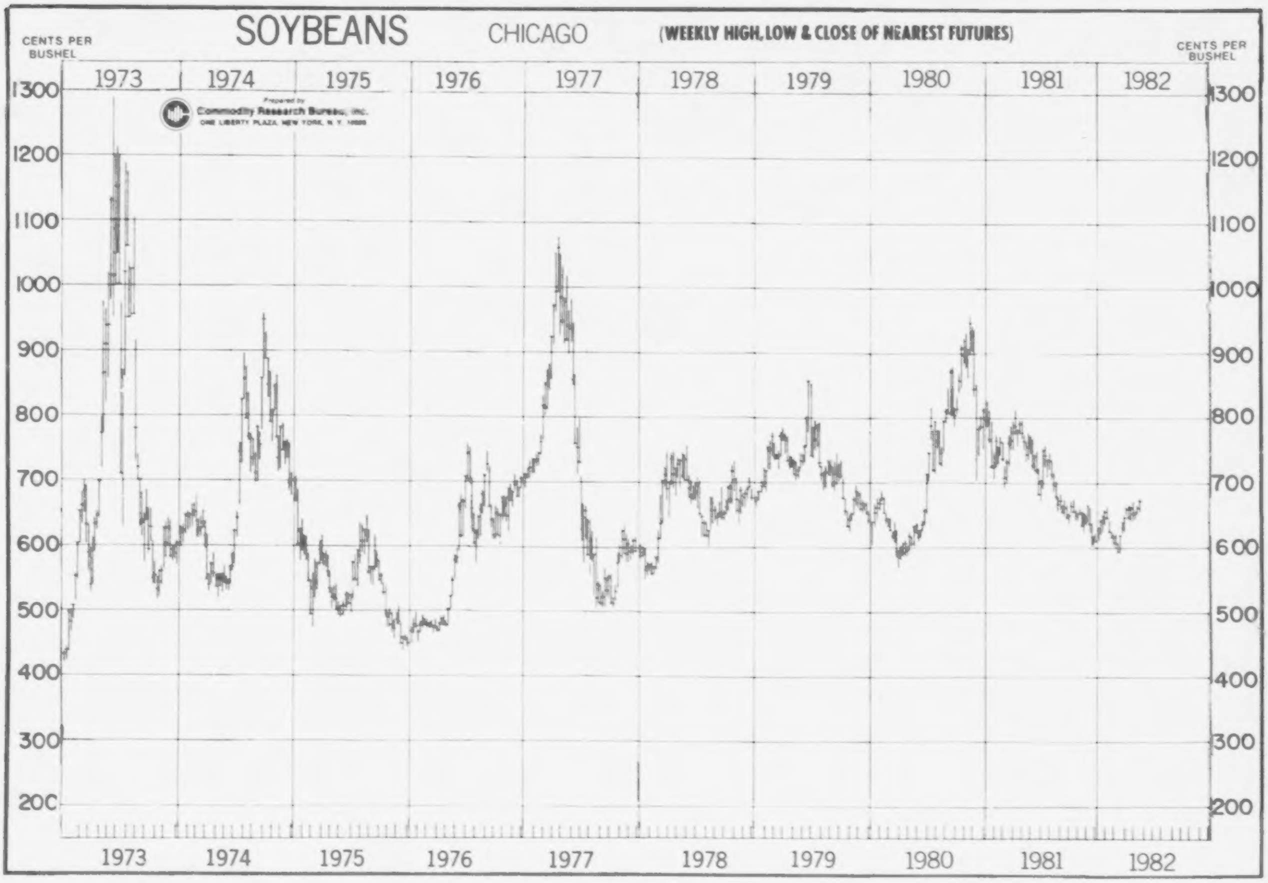
Year	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Total
1971–2	29.2	29.4	47.4	50.3	42.4	35.5	31.3	37.3	31.7	31.1	26.3	24.9	416.8
1972–3	15.0	54.3	61.2	49.7	47.1	54.7	59.1	45.5	41.0	26.5	14.2	11.0	479.4
1973–4	7.5	46.6	74.4	58.0	48.3	56.4	57.9	62.0	43.5	36.1	27.1	21.2	539.1
1974–5	22.9	32.2	63.2	41.4	50.0	33.3	38.4	35.8	25.1	14.0	31.0	33.4	420.7
1975–6	24.3	62.7	61.5	49.6	51.8	52.2	52.3	50.5	49.5	47.2	29.2	24.3	555.1
1976–7	22.2	60.1	67.4	56.7	50.9	59.9	58.4	57.0	55.1	31.0	27.2	18.1	564.1
1977–8	15.0	77.6	87.7	57.0	52.6	54.4	66.6	72.7	79.3	63.4	34.7	39.3	700.5
1978–9	38.0	87.6	101.7	70.6	77.0	53.2	83.5	67.7	46.8	40.9	32.7	39.7	739.2
1979–0	40.9	88.9	118.1	78.3	85.8	73.0	69.4	81.3	74.2	58.7	49.1	57.7	875.2
1980–1[1]	41.4	60.3	75.0	74.5	71.7	55.5	103.2	60.0	69.6	41.8	29.6	41.8	724.3
1981–2	50.9	100.8	103.7	73.6	84.3	89.4							

[1] Preliminary. *Source: Bureau of the Census*

Average Price Received by Farmers for Soybeans in the U.S. In Cents Per Bushel

Year	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Average
1975–76	532	492	445	428	446	450	446	452	487	616	673	607	492
1976–77	665	590	611	656	681	706	783	905	924	813	652	548	681
1977–78	517	528	561	568	575	553	620	649	677	669	640	621	588
1978–79	620	626	641	649	658	699	716	706	706	736	736	707	666
1979–80	681	635	630	627	639	620	594	563	576	591	675	718	628
1980–81	759	768	818	780	780	750	759	760	740	705	713	671	761
1981–82	621	606	603	600	613	604	599	611					

Source: Crop Reporting Board



Volume of Trading in Soybean Futures at the Chicago Board of Trade[1] In Millions of Bushels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1969	355.5	306.9	320.6	360.1	329.2	286.1	341.0	261.9	482.2	983.0	604.6	373.5	5,004.6
1970	485.9	412.8	394.1	497.7	389.1	1,132	1,485	874.5	722.9	1,470	1,185	1,107	10,156
1971	1,266	837.0	903.2	934.9	1,039	1,440	1,548	1,384	1,384	1,925	1,678	1,226	15,565
1972	1,441	1,371	2,133	2,086	1,732	1,543	1,398	1,665	1,150	1,559	2,039	2,100	20,217
1973	2,150	1,344	1,387	1,241	1,345	871	757	879	577	992	1,178	993	13,712
1974	1,229	1,045	1,224	1,187	1,234	1,194	1,103	1,122	885	1,368	892	1,173	13,564
1975	1,409	1,204	1,473	1,497	1,481	1,400	2,117	1,893	1,621	2,204	1,759	1,508	19,567
1976	1,533	1,298	1,215	1,456	2,410	3,414	2,638	2,333	2,480	3,023	2,893	2,678	27,371
1977	3,483	2,564	5,062	4,707	3,550	4,012	2,468	2,312	2,378	2,734	3,897	2,813	39,981
1978	2,978	2,224	5,057	4,121	3,820	3,742	2,662	2,965	2,561	4,754	3,992	3,511	42,386
1979	3,701	5,038	4,123	3,856	3,686	5,485	4,184	2,843	2,920	3,946	3,115	2,674	45,572
1980	3,222	2,916	2,808	3,035	2,911	3,602	6,803	5,226	6,562	7,706	7,025	7,024	58,841
1981[2]	5,808	4,074	4,796	4,585	3,917	4,737	4,821	3,897	3,626	4,087	3,765	4,337	52,450
1982[2]	3,120	3,497	4,478	4,484									
1983													

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[1] Trading on this market represents approximately 98% to 99% of all trading in Soybeans. [2] Preliminary.

Source: Commodity Futures Trading Commission

Soybeans Under Price Support Through the End of Month (Cumulative Totals from Current Season's Crop) In Thousands of Bushels

Year	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Total
1969–0	44	30,274	97,992	137,766	172,395	175,913	178,173	179,366	179,540	179,609	179,598	179,600	180,000
1970–1	128	23,449	64,494	114,092	140,103	143,355	145,300	146,127	146,406	146,463	146,462	146,462	147,000
1971–2	992	41,831	101,163	140,421	163,979	167,187	168,044	168,221	168,271	168,297	—	—	168,278
1972–3	58	21,067	56,609	75,190	86,803	89,338	90,368	90,546	90,561	90,560	—	—	
1973–4	171	11,009	75,213	101,310	120,240	122,752	123,613	124,067	124,170	124,188	—	—	
1974–5	121	3,868	13,186	19,410	22,426	23,275	23,828	34,217	34,543	34,574	—	—	
1975–6	No Program												
1976–7	270	3,398	8,471	13,398	14,966	15,253	15,433	22,450	22,491	22,491	—	—	
1977–8	360	13,135	47,879	68,269	89,128	93,293	96,234	96,808	97,048	97,146	—	—	
1978–9	0	6,403	31,008	43,015	58,278	61,489	62,365	63,146	63,508	64,087	—	—	
1979–0	11	9,507	39,559	67,372	101,052	106,135	113,638	119,860	121,684	122,013	—	—	
1980–1	22	11,705	28,541	67,744	100,809	116,167	125,480	130,236	132,346	133,160	—	—	
1981–2	1,044	26,019	81,377	138,202	191,386	208,285	216,412	219,743					

Source: U.S. Department of Agriculture

Soybean Receipts at Primary Markets in the United States In Thousands of Bushels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1969	2,651	3,776	3,622	3,803	3,671	4,366	5,859	6,988	9,633	36,390	22,796	8,058	111,618
1970	5,876	8,481	8,786	10,648	7,516	12,056	15,063	9,417	7,017	24,277	20,112	14,120	143,369
1971	6,672	6,048	8,164	5,508	6,116	13,053	12,438	6,075	5,237	29,723	13,580	2,358	114,972
1972	2,565	3,904	5,111	3,516	2,023	2,426	2,729	3,859	1,297	17,623	11,080	12,886	69,019
1973	13,106	8,779	6,776	4,267	5,717	3,331	3,354	2,059	1,077	14,946	13,330	3,976	80,718
1974	4,596	5,647	5,712	5,051	5,224	3,964	7,159	4,557	2,348	18,486	7,795	3,070	74,065
1975	1,969	1,390	1,865	1,823	1,843	2,665	4,505	3,066	2,131	25,944	5,988	2,049	55,238
1976	2,449	2,337	3,002	2,146	2,228	3,715	3,640	1,280	3,374	13,927	4,533	1,933	44,564
1977	3,335	3,337	4,736	4,075	6,824	781	152	1,980	1,208	11,960	7,986	4,023	50,397
1978	2,575	1,933	3,346	4,494	7,588	3,986	1,780	3,803	2,856	17,056	8,468	2,353	60,238
1979	2,718	4,007	2,938	2,916	2,669	3,545	2,370	2,034	2,375	20,795	9,360	3,138	58,965
1980	2,994	4,404	3,445	5,987	7,339	11,406	6,950	4,524	8,222	31,589	9,752	3,849	100,461

Source: Chicago Board of Trade

Soybeans Crushed (Factory Consumption) in the U.S. In Millions of Bushels—One Bushel = 60 Pounds

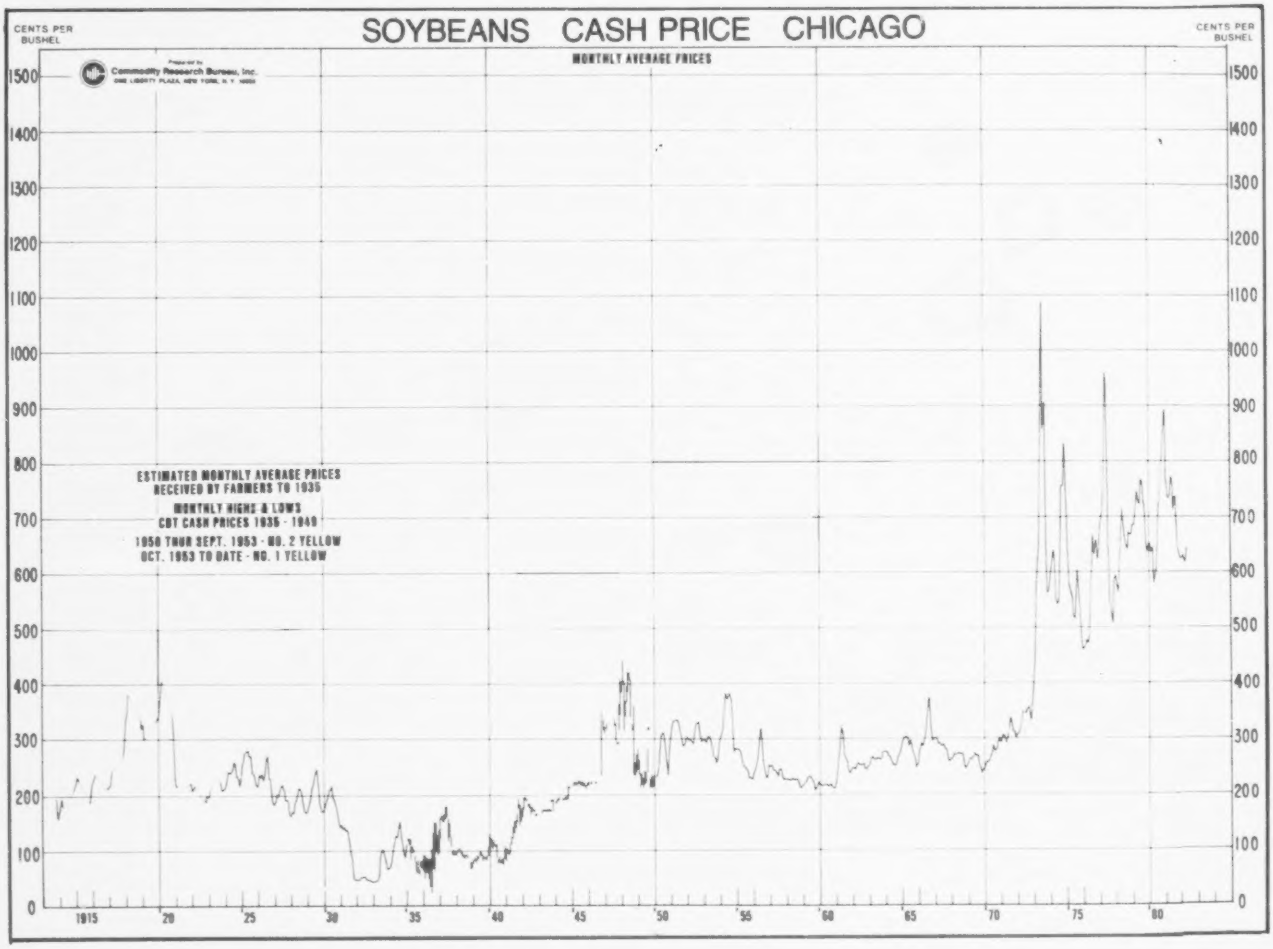
Year	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Total
1969–0	47.5	61.8	62.0	63.1	62.9	58.8	62.9	62.5	67.4	63.7	62.7	62.0	737.3
1970–1	53.3	66.8	65.9	68.1	67.7	60.1	63.6	63.8	63.8	61.1	62.4	63.6	760.1
1971–2	54.5	59.5	59.8	64.0	63.9	60.2	63.9	58.5	63.0	57.1	58.2	57.9	720.5
1972–3	52.2	66.8	70.7	69.2	70.6	64.8	64.4	58.2	61.7	52.2	44.5	46.5	721.8
1973–4	41.4	62.8	71.8	72.8	74.7	70.4	75.8	69.6	71.7	69.4	72.2	68.8	821.3
1974–5	53.6	61.6	60.8	60.2	63.1	54.1	61.0	57.5	53.0	53.1	59.2	64.0	701.3
1975–6	56.5	71.4	71.1	77.8	74.9	69.3	77.9	77.2	79.6	74.6	70.6	64.2	865.1
1976–7	68.8	72.9	73.4	72.7	72.2	71.6	74.4	67.1	61.2	56.2	50.6	49.1	790.2
1977–8	51.9	75.8	85.3	86.6	85.3	75.4	86.5	80.1	82.7	72.4	70.8	73.9	926.7
1978–9	71.4	89.3	89.6	96.4	90.6	81.5	89.0	83.3	86.9	82.8	80.6	76.4	1,018
1979–0	75.9	95.8	101.4	104.4	106.6	100.0	102.2	92.0	93.8	82.7	84.9	83.7	1,123
1980–1[1]	81.0	97.8	98.5	94.1	92.2	79.6	88.7	85.4	82.3	73.4	72.3	74.6	1,020
1981–2[1]	75.4	104.5	97.6	102.5	94.9	87.2							

[1] Preliminary. *Source: Bureau of the Census*

Month End Open Interest of Soybeans Futures at Chicago Board of Trade In Millions of Bushels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	470.3	438.0	499.4	483.9	553.5	491.8	452.8	485.8	562.2	726.6	720.1	775.1
1979	613.9	719.0	642.0	576.1	562.2	584.4	514.4	477.1	534.9	564.7	630.4	704.3
1980	533.2	540.0	502.2	449.6	513.5	615.0	703.5	784.4	880.4	1,069.6	1,102.7	1,064.3
1981	645.7	586.9	565.0	551.4	523.3	513.6	470.3	455.7	449.1	523.2	491.4	426.6
1982	400.8	391.6	435.2	422.1								

Source: Chicago Board of Trade



Average Cash Price of No. 1 Yellow Soybeans at Chicago (Illinois Processor[1]) In Cents per Bushel

Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Average
1969–0	238	242	247	255	259	258	264	270	271	289	279	281	263
1970–1	295	300	293	303	306	304	291	303	321	338	329	312	308
1971–2	312	300	308	309	318	337	349	349	347	351	355	348	324
1972–3	333	364	413	446	580	624	652	894	1087	847	900	610	622
1973–4	562	557	592	617	635	629	559	547	551	711	776	764	612
1974–5[1]	830	754	723	638	569	560	555	523	516	560	602	557	632
1975–6	501	471	460	466	477	471	475	523	623	666	631	659	526
1976–7	622	655	686	706	726	825	960	942	825	640	549	516	721
1977–8	507	584	594	573	565	658	681	701	676	662	647	642	624
1978–9	672	668	681	689	728	745	727	721	768	764	728	704	716
1979–0	656	652	653	636	642	607	580	604	610	722	745	813	660
1980–1	827	891	773	757	734	737	772	758	713	736	694	644	753
1981–2	630	628	623	630	624	616							
1982–3													

[1] Illinois points—beginning Oct. 1974. *Source: Consumer & Marketing Service, U.S.D.A.*

Sugar

Record-large world sugar production in the 1981/82 season (September–August), about 11 percent above the previous season, was forecast by the USDA in early 1982. Increased production prospects in the EEC, India, Cuba, and in some other countries more than offset another poor Soviet harvest. World sugar consumption in 1981/82 was expected to increase about 4 percent from the 1980/81 season, with gains limited primarily to developing countries, and use in most industrialized countries curbed due to the adverse effects of recession and the continued gains made by high fructose corn syrup (HFCS) in some countries. Ending 1981/82 season world sugar stocks were projected by the USDA to increase by about 18 percent from the relatively low 1980/81 carryover.

The world raw sugar price (International Sugar Agreement price) dropped to a 2-year low of 11.65 cents per pound in September 1981 before improving briefly on reports of increased Soviet import needs, but prices dropped below 8 cents by mid-May 1982.

Calendar 1981 U.S. sugar production was 8 percent larger than in 1980. Sugar distribution for continental U.S. consumption was off 4 percent primarily because of increased deliveries of high fructose corn syrup. But, owing to heavy exports, total distribution was 1 percent above the 1980 total. Sugar stocks held by U.S. primary distributors at the end of 1981 were 10 percent higher than a year earlier.

High Fructose Corn Syrup (HFCS)

HFCS shipments for food use in 1981 amounted to about 2.65 million tons (dry basis), up 20 percent from the 1980 total. HFCS use in beverages reportedly soared 30 percent to around 1.2 million tons, while deliveries for use in confections—where it is more difficult to substitute HFCS for sugar—increased an estimated 4 percent. HFCS per capita consumption increased an estimated 4 pounds from the 1980 level, to 23 pounds. The use of HFCS in beverages and food has been increasing because it has generally been less expensive than sucrose. The U.S. sugar support program is expected to favor continuation of this trend. HFCS use was expected by the USDA to increase to around 3 million tons in 1982, with use of 55-percent fructose HFCS likely to increase substantially.

The U.S. Sugar Program

The Agriculture and Food Act of 1981 provides for purchase and loan program at specified prices for domestically produced sugarcane and sugar beets through the 1985/86 crop year. A purchase price of 16.75 cents per pound was established for raw cane sugar and 19.15 cents per pound for refined beet sugar processed during December 22, 1981–March 31, 1982. In addition, a non-recourse loan program covers sugar produced during 1982/83–1985/86 at annually increasing loan rates of 17.00 cents; 17.50; 17.75; and 18.00 cents per pound for cane sugar. Beet sugar purchases and loan rates were to be determined in relation to support for cane.

Because of depressed world sugar prices, the existing system of import duties/fees was inadequate in early 1982 to establish prices at which U.S. sugar producers would sell to the market rather than to the government under the existing purchase program or forfeit sugar to the CCC when the loan program became operative. Accordingly on May 5, 1982, President Reagan signed two proclamations. The first increased the Market Stabilization Price (MSP) to 19.88 cents per pound, raw value, from the previous 19.08 cents for the remainder of the October 1981/September 1982 crop year. A quarterly import fee is to be imposed, reflecting the difference between the MSP and the 20-business day adjusted No. 12 sugar spot price average. Intra-quarter adjustment of the fee by one cent is to take place when the 10-business day average No. 12 spot price goes one cent above or below the MPS.

The second proclamation established sugar import quotas at 220,000 short tons for the remainder of the second quarter of 1982. Import quotas for the third quarter of 1982 and for subsequent quarters were expected to be announced 15 days before the start of the quarter. Country-by-country import allocations were to be based on average shipments to the U.S. in 1975–81, excluding the highest and lowest years.

The International Sugar Agreement (ISA)

The ISA daily price for raw sugar in 1981 remained generally below its 13 to 23 cents per pound target range. A 1982 global export quota of 12.035 million tonnes was set in May 1982, based on estimated world import requirements on the free market of 18.706 million tonnes. But the effective quota amounted to 16.86 million tonnes (85 percent of the BETs). In addition, measures were adopted for the accumulation by members of additional special stocks of uncommitted sugar totaling 1.5 million tonnes by

World Production of Sugar (Centrifugal Sugar—Raw Value) In Thousands of Metric Tons

Crop Year	Australia Cane	Brazil Cane	China (Mainland)	Cuba Cane	Hawaii Cane	India Cane	Indonesia Cane	Philippines Cane	Poland Beet	W. Germany	United States Beet	United States Cane	U.S.S.R. Beet	Mexico	France	World Total All
1973–4	2,592	6,959	2,065[3]	5.800	944	4,949	950	2,643	1,817	2.500	2,918	1,253	9,568	2,805	3,255	80,488
1974–5	2.927	7,400	2,400	6.300	1,004	5,794	1,000	2,466	1,557	2,438	2,645	1,334	7,730	2,696	2,948	78,620
1975–6	2,988	6,200	2,311	6,200	953	5,464	1.030	2,875	1,860	2,540	3,646	1,657	7,700	2,698	3.239	81,679
1976–7	3,405	7.500	2,153	6,100	938	6.043	1,068	2,753	1,801	2,734	3.534	1,519	7,350	2,696	2,974	86,263
1977–8	3,322	8,863	2,450	7,200	934	8,201	1.125	2,397	1,819	3.076	2,820	1,497	8,825	3,029	4,268	92,454
1978–9	2.978	7,740	2,675	7,500	962	7.071	1,385	2,347	1,763	2,997	2,984	1,436	9,300	3.058	4,000	91,111
1979–0	2.967	6,968	2,507	6,500	928	5,170	1,313	2,325	1,582	3,095	2,612	1,488	7,800	2,765	4,257	84,150
1980–1	3.387	8,101	3,052	6,400	966	6,534	1,370	2,373	1,126	2,982	2,798	1,547	6,900	2,518	4.187	86,741
1981–2[1]	3,550	8,500	3,356	6,800	939	8,194	1,520	2,450	1,021	3,350	3,025	1,660	7,100	2,700	5.086	95,756

[1] Estimated. [2] Preliminary. [3] Average 1969/70–1973/4. *Source: Foreign Agricultural Service, U.S.D.A.*
Source: Foreign Agricultural Service, U.S.D.A.

the end of 1983, to bring the amount of special stocks withheld from the market to 2.5 million tonnes. The global quota is considered a "paper quota" because actual quotas for each country can go no lower than 85 percent of the Basic Export Tonnages (BETs). The BETs for 1982, 1983, and 1984 were frozen at 19.44 million tonnes. The ISA has been extended to December 31, 1984.

Futures Markets

Both world (No. 11) and domestic (No. 12) sugar futures are traded on the Coffee, Sugar and Cocoa Exchange, Inc. in New York. World raw sugar futures are also actively traded on the London United Terminal Sugar Market. A white sugar futures contract is traded in Paris.

United States Sugar (Cane & Beet) Supply and Utilization In Thousands of Short Tons (Raw Value)

	Supply								Utilization						
	Production			Offshore Receipts									Domestic Disappearance		
														Military & Civilian	
Year	Cane	Beet	Total	Foreign	Territories	Total	Beginning Stocks	Total Supply	Total Use	Exports	Net Changes in Invisible Stocks	Residual	Livestock Feed & Alcohol	Total	Per Capita
1972	2,481	3,534	6,015	5,459	149	5,608	2,823	14,446	11,623	50	–21	45	62	11,487	102.3
1973	2,708	3,353	6,061	5,329	79	5,408	2,823	14,292	11,646	26	91	69	31	11,429	100.8
1974	2,441	3,221	5,662	5,770	157	5,927	2,646	14,235	11,381	72	305	51	8	10,945	95.6
1975	2,827	3,473	6,300	3,882	96	3,978	2,854	13,132	10,276	216	–277	29	6	10,302	89.1
1976	2,795	4,003	6,798	4,658	203	4,861	2,856	14,515	11,017	76	–24	72	—	10,893	93.4
1977	2,666	3,423	6,089	6,138	102	6,240	3,498	15,827	11,336	22	201	14	—	11,099	94.2
1978	2,535	3,067	5,602	4,683	52	4,735	4,491	14,828	11,074	16	57	108	4	10,899	91.4
1979	2,727	3,066	5,793	5,027	47	5,074	3,754	14,621	10,920	18	43	103	—	10,756	89.3
1980[1]	2,684	3,052	5,736	4,495	178	4,673	3,701	14,110	11,028	650	111	78	—	10,189	83.6
1981[2]	2,706	3,504	6,210	5,000	50	5,050	3,082	14,342	10,953	1,070	22	55	—	9,806	79.8

[1] Preliminary. [2] Estimate. *Source: Agricultural Marketing Service, U.S.D.A.*

Sugar Cane for Sugar & Seed and Production of Cane Sugar and Molasses in the United States

			Production				Farm Value		Sugar Production			Molasses Made		
									Raw Value					
Year	Acreage Harvested 1,000 Acres	Yield of Cane per Acre Tons	for Sugar 1,000 Tons	for Seed 1,000 Tons	Total 1,000 Tons	Farm Price $ per Ton	of Cane used for Sugar 1,000 Dollars	of Cane used for Sugar & Seed 1,000 Dollars	Total 1,000 Tons	Per Ton of Cane Lbs.	Refined Basis 1,000 Tons	Blackstrap (80° Brix) 1,000 Gallons	Edible 1,000 Gallons	Total 1,000 Gallons
1972	702	40.4	27,239	1,093	28,332	11.60	201,639	211,724	2,740	201	2,561	178,263	2,290	180,553
1973	741	34.9	24,924	903	25,827	20.90	319,503	333,061	2,549	205	2,383	164,001	1,926	167,486
1974	734	33.8	23,721	1,091	25,140	48.60	1,166,809	1,221,232	2,512	212	2,347	152,682	1,559	156,355
1975	774	36.6	27,306	1,038	28,344	21.50	586,622	607,895	2,934	214	2,743	177,428	2,114	178,988
1976	747	37.6	26,919	1,201	28,120	15.20	408,403	425,342	2,724	202	2,545	179,180	2,574	180,730
1977	759	35.3	25,730	1,100	26,830	17.70	454,217	474,257	2,684	209	2,508		2,538	164,894
1978	744	35.0	24,821	1,176	25,997	19.50	483,905	507,069	2,612	210	2,441		2,750	161,810
1979	733	36.2	25,410	1,122	26,532	26.00	661,212	690,544	2,700	213	2,524		2,900	164,581
1980[1]	733	36.8	25,582	1,381	26,963	38.50	984,559	1,035,990	2,728	199	2,503		1,900	163,341
1981[1]	754	39.6	28,706	1,140	29,846				3,012					174,935

[1] Preliminary. *Source: Statistical Reporting Service, U.S.D.A.*

U.S. Sugar Beets, Beet Sugar, Pulp, & Molasses Produced from Sugar Beets & Raw Sugar Spot Prices

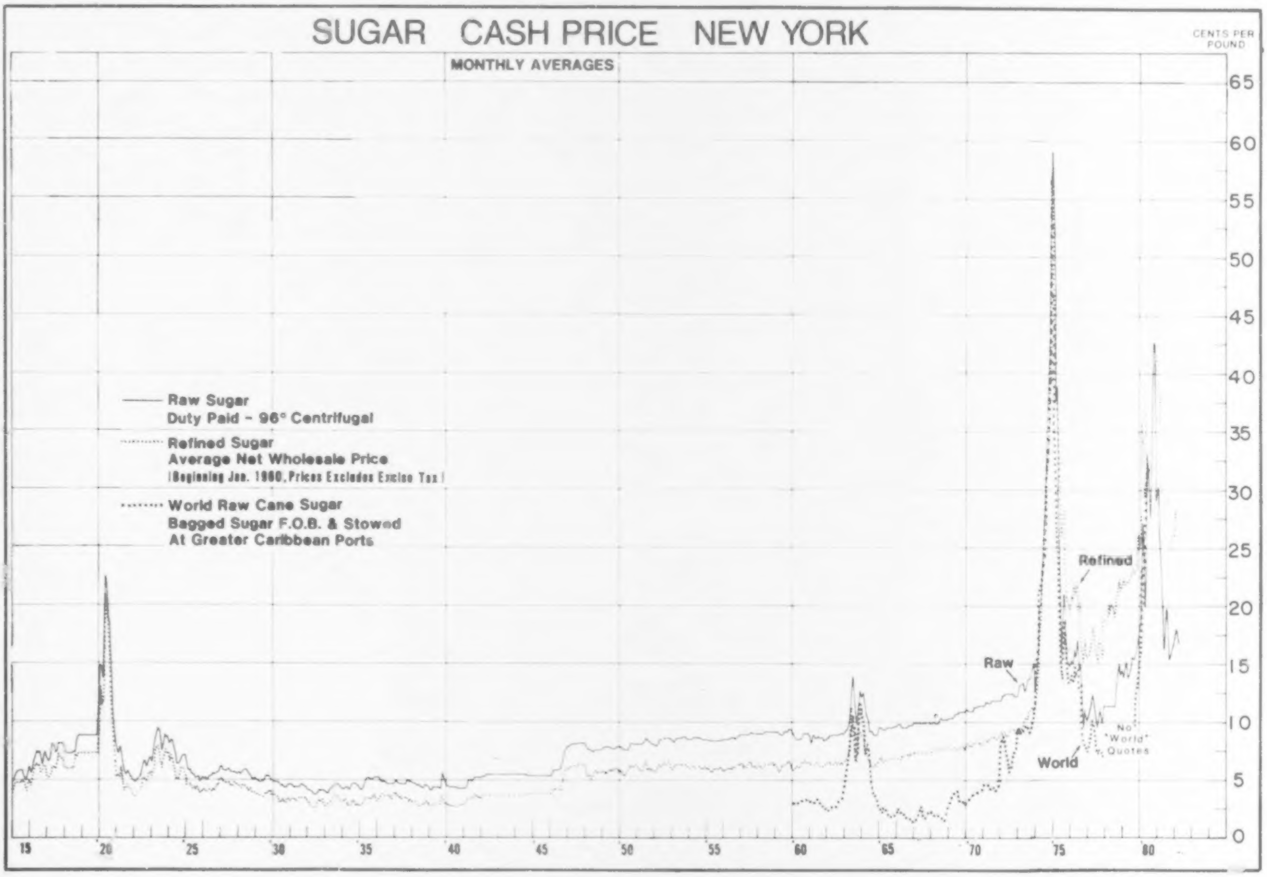
	Sugar Beets						Sugar Production		Raw Sugar Prices			
	Acreage									Cof., Sugar Exch.		
Year of Harvest	Planted 1,000 Acres	Harv. 1,000 Acres	Yield Per Har. Acre Tons	Production 1,000 Tons	Price[1] Dollars	Farm Value $1,000	Refined Basis 1,000 Sh. Tons	Equivalent "Raw Value"[2] 1,000 Sh. Tons	Intern.[4] Agreem. Cents Per Lb.	World Cents Per Lb.	N.Y. Duty Paid Cents Per Lb.	Sugar Act Beet Payments $ Per Ton
1973	1,280	1,218	20.1	24,499	29.60	725,661	2,990	3,200	9.45	9.61	10.29	2.08
1974	1,252	1,213	18.2	22,123	46.80	1,035,567	2,725	2,916	29.66	29.99	29.50	2.06
1975	1,595	1,517	19.6	29,704	27.60	820,743	3,756	4,019	20.37	20.49	22.47	
1976	1,525	1,479	19.9	29,386	21.00	616,813	3,640	3,895	11.51	11.58	13.31	
1977	1,273	1,216	20.6	25,007	24.20	604,399	2,905	3,108	8.10	8.11	11.00	
1978	1,305	1,269	20.3	25,788	25.20	649,846	3,074	3,289	7.81	7.82	13.93	
1979	1,161	1,120	19.6	21,996	33.90	745,273	2,691	2,879	9.65	9.66	15.56	
1980[3]	1,231	1,190	19.8	23,502			2,943	3,149	28.66	29.02	30.11	
1981[3]	1,258	1,230	22.2	27,271			3,130	3,349	16.89	16.93	19.73	
1982[3]	1,171											

[1] Includes support payments, but excludes Sugar beet payments. [2] Refined sugar multiplied by factor of 1.07. [3] Preliminary. [4] International Sugar Agreement, World Price. *Source: Statistical Reporting Service, U.S.D.A.*

Average Raw Cane Wholesale Sugar (96°) Prices[1] Duty Paid C.I.F. New York In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1972	9.10	9.02	9.16	8.89	8.76	8.77	9.17	9.33	9.39	9.32	9.03	9.19	9.09
1973	9.38	9.14	9.45	9.65	10.06	10.25	10.25	10.75	10.97	11.15	11.10	11.34	10.29
1974	12.63	17.09	18.11	19.25	23.05	26.30	28.35	32.60	33.71	38.83	57.30	46.74	29.50
1975	37.5	38.8	30.0	28.2	19.5	14.8	19.4	22.5	17.5	15.2	15.5	15.6	22.9
1976	15.4	15.0	16.4	15.6	16.7	14.4	15.0	11.9	9.5	11.2	10.6	10.2	13.5
1977	10.5	11.3	11.7	12.4	11.2	10.0	9.5	11.0	10.8	9.8	11.4	11.4	10.9
1978	11.4	11.4	11.4	11.4	11.4	11.4	11.4	13.5	14.4	15.0	14.2	14.5	14.3
1979	13.8	15.0	15.3	13.9	14.1	14.6	15.7	15.4	15.7	15.9	16.2	18.0	15.3
1980	18.9	27.2	20.0	23.2	33.1	32.4	27.7	35.1	37.2	42.7	40.9	29.1	30.6
1981	30.3	26.6	23.1	20.0	16.3	19.1	19.8	18.5	15.4	16.0	16.3	16.7	19.8
1982	18.0												
1983													

[1] Domestic sugar at N.Y., duty paid. *Source: N.Y. Coffee & Sugar Exchange*



Sugar, Refined—Deliveries by Type or Product of Buyer in the U.S. In Thousands of Cwt.

Year	Bakery & Allied Pdts.[2]	Beverages	Confectionery[3]	Hotels, Restaurants[4]	Ice Cream & Dairy Products	Jams, Jellies, Preserves[5]	Multiple & Other Food Uses	Non-Food Uses	Retail Grocers[6]	Wholesale Grocers[7]	All Other[8]	Total Deliveries	In Consumer Size Pckgs.	To Industrial Users
1971	27,125	47,287	21,046	1,588	11,125	20,575	9,917	1,861	26,580	43,197	1,903	212,204	52,199	138,935
1972	28,987	48,740	21,139	1,693	11,985	19,739	10,158	1,811	26,324	42,057	1,757	214,390	51,136	65,807
1973	29,074	49,387	20,704	1,879	11,901	20,496	10,040	2,221	26,325	41,269	2,125	215,420	50,603	68,338
1974	28,856	46,992	20,374	1,811	11,404	18,981	10,278	2,557	27,072	40,043	2,421	210,788	51,617	66,396
1975	23,757	40,390	15,334	1,423	9,755	14,045	9,359	1,679	24,626	37,089	1,640	185,453	48,188	59,299
1976	24,571	43,263	17,332	1,275	10,353	13,644	9,793	1,954	25,404	40,684	2,595	200,868	48,790	64,455
1977	26,641	47,918	18,391	1,391	10,914	14,201	10,458	2,048	25,235	40,668	2,901	207,046	49,196	70,600
1978[1]	25,657	51,540	17,895	2,078	10,380	13,444	8,142	3,167	23,363	39,259	3,140	200,540	45,342	67,352
1979[1]	24,718	47,069	17,621	2,038	9,198	12,887	9,294	2,463	24,284	39,624	3,358	198,689	49,192	67,156
1980[1]	25,956	42,429	18,122	1,913	8,738	10,330	11,396	2,342	23,009	36,847	8,466	189,548	46,941	65,439
1981[1]	25,587	36,584	19,265	1,791	9,020	9,480	11,422	2,507	23,044	39,600	3,599	181,896	48,497	64,606
1982														

[1] Preliminary. [2] Cereals and cereal products. [3] And related products. [4] And institutions. [5] Canned, bottled & frozen foods. [6] Chain stores, supermarkets. [7] Jobbers, sugar dealers. [8] Including Gov't. agencies. *Source: Stat. Rep. Serv., U.S.D.A.*

World Stocks of Centrifugal Sugar at Start of Grinding Season In Thousand Metric Tons[2] (Raw Value)

Sugar-Making Season	Australia June 1	Brazil June 1	France Oct. 1	W. Germany Oct. 1	India Nov. 1	Italy Aug. 1	Japan Oct. 1	Mexico Nov. 1	Netherlands Oct. 1	Philippines Oct. 1	Sweden Aug. 1	Iran Oct. 1	United Kingdom Sept. 1	U.S. & Ins. Areas Oct. 1	Total
1971–2	475	1,430	1,021	861	1,554	263	493	486	43	251	86	550	543	1,450	12,190
1972–3	279	1,377	1,080	941	659	287	591	334	72	62	160	578	841	1,204	11,136
1973–4[3]	253	1,249	980	854	598	260	536	303	65	56	145	524	763	1,092	10,101
1974–5	408	791	143	757	657	357	259	327	50	152	157	385	629	1,135	8,368
1975–6	155	1,591	269	137	843	500	267	547	96	405	139	191	208	2,444	9,902
1976–7	328	1,746	174	165	737	337	98	642	139	744	138	207	139	2,399	10,574
1977–8	534	1,286	706	202	732	562	104	198	199	1,607	127	304	253	2,718	12,820
1978–9	383	1,516	947	305	1,448	859	350	134	207	1,290	140	364	234	3,375	15,843
1979–0	577	2,648	940	408	3,211	697	446	263	187	997	136	358	217	3,339	18,874
1980–1[1]	674	3,008	1,027	537	1,949	758	421	138	222	1,214	108	454	455	3,553	19,224
1981–2															

[1] Preliminary. [2] Data prior to 1973–74 are in THOUSANDS OF SHORT TONS. *Source: Foreign Agricultural Service, U.S.D.A.*

Sugar Stocks of Primary Distributors in the U.S. at Beginning of Month In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1970	2,796	2,858	2,827	2,671	2,636	2,424	2,104	1,726	1,384	1,046	1,414	2,202
1971	2,792	3,003	2,943	2,701	2,660	2,524	2,157	1,932	1,629	1,450	1,582	2,134
1972	2,687	3,008	3,059	2,898	2,874	2,672	2,343	2,032	1,532	1,204	1,638	2,217
1973	2,710	2,941	3,038	2,777	2,831	2,604	2,291	2,040	1,454	979	1,251	1,902
1974	2,583	2,488	2,509	2,493	2,174	2,034	1,949	1,613	1,200	950	1,202	1,822
1975	2,800	3,067	2,970	2,836	2,521	2,299	1,946	1,275	1,032	958	1,415	2,088
1976	2,731	3,171	3,201	2,933	2,778	2,569	2,314	2,038	1,689	1,324	1,660	2,504
1977	3,341	3,624	3,758	3,430	3,302	3,191	2,782	2,424	2,019	1,951	2,259	3,009
1978	4,349	4,352	4,104	3,850	3,451	3,326	3,059	2,729	2,264	2,054	2,324	3,084
1979[1]	3,734	3,927	4,034	3,662	3,644	3,559	3,280	2,950	2,220	1,977	2,296	2,962
1980[1]	3,503	3,606	3,563	3,384	3,071	2,841	2,510	2,204	1,866	1,548	1,679	2,345
1981[1]	2,970	3,330	3,472	3,195	2,807	2,755	2,285	1,928	1,602	1,416	1,579	2,416
1982[1]	3,264	3,743	3,644									
1983												

[1] Preliminary. *Source: Commodity Stabilization Service, Sugar Division*

United States Production & Imports of Edible Sirups In Thousands of Gallons

	Production[2]								Imports				
	Sirups												
Year	Corn	Cane	Sorghum	Maple	Refiners'	Edible Molasses	Honey	Total	Maple Sirup	Edib. Molas. & Cane Sirup	Honey	Shipm. From Terr.	Total
1970	292,000	—	—	1,110	1,695	2,121	18,726	315,652	956	2,165	749	—	3,870
1971	304,000	—	—	962	1,883	2,517	16,708	326,070	577	2,470	967	—	4,014
1972	387,880	—	—	1,099	2,077	2,290	18,210	411,556	710	1,694	3,291	—	5,695
1973	451,264	—	—	857	2,309	1,926	20,193	476,549	803	2,935	900	—	4,638
1974	498,313	—	—	1,087	2,564	1,559	15,866	519,389	801	2,508	2,196	—	5,505
1975	561,215	—	—	1,207	2,482	2,114	16,823	583,841	607	2,483	3,917	—	7,007
1976	615,498	—	—	927	2,403	2,574	16,756	638,158	886	3,188	5,608	—	9,682
1977	695,196	—	—	1,221	2,197	2,538	15,076	716,228	867	1,773	5,396	—	8,036
1978	751,809	—	—	1,154	2,571	2,750	19,466	777,750	811	2,077	4,727	—	7,615
1979	845,741	—	—	1,219	2,524	2,900	20,081	872,465	857	2,944	4,947	—	8,748
1980[1]	941,056	—	—	973	1,983	1,900	16,857	962,769	855	3,737	4,142	—	8,734
1981													

[1] Preliminary. [2] Production of cane sirup, sorghum sirup, & edible molasses is of the fall of the preceding year.
Source: Agricultural Marketing Service, U.S.D.A.

U.S. Exports & Domestic Consumption of Edible Sirups, Corn Sugar & Sugar In Thousands of Gallons

	Exports			Indicated Domestic Consumption					Per Capita Consumption in Pounds						Total Sugar Consumption Mil. Tons
				Sirups								Sugar			
Year	Corn Sirup	Honey	Total	Corn	Maple	Cane & Refin. & Edib. Mol.	Honey	Total	Corn Sweeteners[2]	Corn Sugar	Saccharin	U.S. Grown	Cane	Total	
1970	1,324	689	2,013	290,676	2,066	5,981	18,717	317,510	19.3	5.0	5.8	56.3	70.4	101.7	11.2
1971	1,324	639	1,964	302,676	1,539	6,870	17,035	328,120	20.8	5.0	5.1	53.5	71.5	102.1	11.3
1972	1,205	346	1,551	386,675	1,809	6,061	21,155	415,700	21.1	4.8	5.1	55.6	72.0	102.3	11.5
1973	1,377	1,485	2,861	449,887	1,660	7,170	19,609	478,326	23.4	5.2	5.1	54.9	70.6	100.8	11.4
1974	1,736	386	2,122	496,577	1,888	6,631	17,676	522,772	25.1	5.3	5.9	46.6	69.8	95.6	10.9
1975	1,070	337	1,407	560,145	1,814	7,079	20,403	588,441	27.5	5.5	6.2	54.7	59.0	89.1	10.3
1976	1,674	396	2,070	613,824	1,813	8,165	21,968	645,770	29.7	5.5	6.1	54.4	61.4	93.4	10.9
1977	1,543	466	2,009	693,653	2,088	6,508	20,006	722,255	31.2	5.5	6.6	52.7	64.4	94.2	11.1
1978	1,694	679	2,373	750,115	1,965	7,398	23,514	782,992	33.7	5.5	6.9	50.3	64.0	91.4	10.9
1979	1,207	747	1,954	844,534	2,076	8,368	24,238	879,259	36.8	5.5	7.0	47.6	62.8	89.3	10.8
1980[1]	3,498	722	4,220	937,558	1,828	7,620	20,277	967,283	40.6	5.5	7.0	51.2	56.8	83.6	10.2
1981[1]									44.9		7.1	50.0	53.9	79.8	9.8
1982															

[1] Preliminary. [2] Corn Syrup & Dextrose. *Source: Agricultural Marketing Service, U.S.D.A.*

Sugar Deliveries and Stocks in the United States In Thousands of Short Tons, Raw Value

	Deliveries by Primary Distributors							Stocks (January 1)					
Year	Cane[1] Sugar Refineries	Beet Sugar Factories	Importers of Direct Consumption Sugar	Cane Sugar Mills[1]	Total	Sales of Refined Sugar For Export	Total Domestic Consumption[2]	Cane Sugar Refineries	Beet Sugar Factories	Importers of Direct-Consumption	Refiners' Raws	Mainland Cane Mills	Total
1970	7,158	3,336	144	57	10,695	66	11,163	251	1,321	9	695	412	2,799
1971	7,306	3,213	111	51	10,681	89	11,345	237	1,266	4	804	376	2,792
1972	7,326	3,281	87	70	10,764	50	11,487	255	1,258	1	785	116	2,710
1973	7,334	3,282	75	81	10,772	26	11,429	233	1,280	3	972	100	2,583
1974	7,590	2,826	56	54	10,526	28	10,946	257	1,130	1	998	412	2,799
1975	6,237	3,068	83	65	9,453	147	9,304	295	1,314	1	886	211	2,799
1976	6,534	3,572	76	15	10,197	68	10,895	250	1,490	0	428	458	2,731
1977	7,026	3,280	172	17	10,495	35	11,248	279	1,661	0	776	509	3,341
1978	6,987	2,989	180	18	10,174	48	10,889	334	1,691	91	1,678	556	4,349
1979	6,985	2,982	84	18	10,069	73	10,755	286	1,560	0	964	641	3,450
1980[3]	7,597	2,971	8	48	10,838	689	10,149	257	1,205	0	541	1,068	3,071
1981[3]	7,686	3,192	18	25	10,922	1,191	9,731	315	1,286	0	691	658	2,950
1982[3]								204	1,261	0	979	800	3,244

[1] Sugar for direct consumption only. [2] Includes deliveries for U.S. military forces at home and abroad. [3] Preliminary.
Source: Department of Agriculture

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Centrifugal Sugar (Raw Value) Imported into Selected Countries   In Thousands of Metric Tons

Year	Algeria	Canada	Chile	France	W. Germany	Israel	Japan	Malaysia	Morocco	Nigeria	Iran	Un. Kingdom	China	United States	U.S.S.R.	World Total[2]
1969	200	946	294	106	181	118	2,228	361	253			2,149		4,432	1,335	18,569
1970	207	949	100	60	193	118	2,600	380	273			1,839	530	4,711	3,005	21,372
1971	261	899	195	108	177	139	2,427	330	246			2,134	464	4,821	1,536	20,708
1972	230	908	233	128	125	161	2,777	356	222		170	2,163	749	4,719	1,924	20,981
1973	278	965	297	100	140	80	2,372	351	278		297	2,050	736	4,781	2,631	22,231
1974	277	901	174	158	100	157	2,771	352	278		226	2,269	411	5,238	1,856	21,860
1975	360	998	178	182	196	150	2,473	345	268		626	2,346	241	3,490	3,327	20,508
1976	354	895	98	136	169	131	2,439	336	263		626	2,101	638	4,136	3,760	22,593
1977	431	1,064	342	110	108	153	2,708	336	389	329	277	1,870	1,676	5,290	4,776	25,949
1978	411	1,030	317	117	152	195	2,284	398	294	595	875	1,689	1,438	3,616	3,993	23,586
1979[1]	482	1,009	315	103	146	403	2,440	427	237	536	746	1,424	985	4,437	4,080	23,784
1980																

[1] Preliminary. [2] Excludes U.S. trade with Territories. *Source: Foreign Agricultural Service, U.S.D.A.*

Centrifugal Sugar (Raw Value) Exported from Selected Countries   In Thousands of Metric Tons

Year	Australia	Brazil	Czechoslovakia	Cuba	Dom. Republic	France	Thailand	Mauritius	Peru	Philippines	South Africa	Taiwan	Un. Kingdom	U.S.S.R.	World Total[2]
1969	2,064	1,099	300	4,799	618	582	*'68'–72*	596	268	1,020		531	203	1,388	19,421
1970	1,389	1,126	350	6,906	793	900	*Avg.*	575	435	1,237	790	410	203	1,517	22,064
1971	1,762	1,191	350	5,511	1,011	1,168	*(133)*	489	432	1,422	828	523	284	1,401	21,455
1972	2,010	2,054	229	4,140	1,099	1,425	419	670	481	1,240	1,168	489	330	64	21,714
1973	2,086	2,820	225	4,797	1,031	1,653	276	701	407	1,474	892	487	299	46	22,839
1974	1,759	2,357	189	5,491	1,055	1,202	444	726	462	1,542	779	553	328	103	23,160
1975	1,969	1,746	227	5,744	975	994	595	498	422	972	809	409	385	59	21,112
1976	2,016	1,252	71	5,764	977	1,422	1,124	584	284	1,467	860	519	285	79	22,818
1977	2,558	2,518	171	6,238	1,101	1,816	1,657	637	434	2,443	1,384	599	178	87	28,271
1978	2,482	2,005	306	7,231	901	2,357	1,040	579	275	1,142	719	365	93	174	25,847
1979[1]	2,303	1,860	280	7,269	992	2,347	1,186	605	181	1,150	724	424	76	244	26,395
1980															

[1] Preliminary. [2] Excludes U.S. trade with Territories. *Source: Agricultural Marketing Service, U.S.D.A.*

Average Refined Cane Wholesale Sugar Prices at New York (Excludes Excise Tax)   In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1970	11.1	10.9	10.9	10.9	10.9	11.3	11.3	11.3	11.4	11.4	11.4	11.4	11.2
1971	11.4	11.4	11.7	11.6	11.6	11.6	11.8	11.8	11.8	11.8	11.8	11.8	11.7
1972	11.8	12.2	12.2	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.2	12.2	12.3
1973	12.2	13.2	13.2	13.3	12.7	12.7	13.2	13.7	13.7	14.1	15.0	12.8	13.3
1974	14.3	16.1	20.0	20.0	24.8	28.5	31.9	33.8	39.5	40.8	54.9	59.2	32.0
1975	51.8	47.9	41.0	36.1	31.9	25.9	26.8	28.3	23.2	20.5	20.7	19.4	31.1
1976	20.9	20.3	22.1	21.0	22.2	19.7	20.4	17.1	15.2	17.2	16.0	15.6	19.0
1977	16.0	16.7	17.1	18.1	17.2	15.7	15.1	17.2	16.5	15.5	19.1	18.5	16.9
1978	18.7	20.1	19.3	20.1	20.0	19.8	19.1	20.5	21.3	22.3	21.4	22.0	20.4
1979	22.3	21.9	22.0	22.2	22.0	22.5	22.6	23.2	22.9	22.9	23.4	26.1	22.8
1980	25.0	36.4	29.5	31.5	42.2	45.2	39.3	44.2	41.3	56.0	55.0	40.3	40.5
1981	43.2	38.3	34.4	31.5	26.6	29.5	28.5	29.5	23.6	26.1	26.1	26.1	30.3
1982	28.2												

Source: Sugar Division, Commodity Stabilization Service

Average Refined Cane Sugar[1] (Wholesale)—Northeast In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1973	13.15	13.18	12.94	13.30	13.55	13.96	14.05	14.50	14.80	14.95	15.13	15.33	14.07
1974	15.65	18.49	20.90	23.78	27.61	31.04	32.50	36.83	40.74	43.59	60.69	60.41	34.35
1975	52.95	48.96	40.50	37.01	32.23	25.57	26.89	27.05	23.30	21.15	20.84	20.53	31.42
1976	21.31	20.86	22.20	21.41	21.87	20.22	20.46	17.04	15.85	16.90	16.28	15.97	19.20
1977	16.70	16.94	17.45	18.52	17.52	16.40	16.13	17.38	16.57	16.35	18.50	18.88	17.28
1978	19.85	20.54	20.03	20.18	20.31	20.13	19.90	20.70	21.83	22.65	22.05	22.27	20.87
1979	22.27	22.44	22.54	22.35	22.53	22.71	22.96	23.79	23.50	23.34	23.48	26.47	23.20
1980	27.51	35.00	29.48	31.55	41.96	43.53	39.92	44.15	48.05	55.06	52.84	42.86	40.99
1981	41.80	37.47	35.51	31.42	27.90	29.74	29.96	28.79	25.08	25.99	27.10	27.40	30.68
1982													

[1] These are f.o.b. basis prices in 100-lb. paper bags, not delivered prices. To obtain delivered prices, add freight "prepays" & deduct discounts & allowances. *Source: Economies & Statistics Service, U.S.D.A.*

United States Deliveries[1] of All Sugar by Primary Distributors In Thousands of Short Tons, Raw Value

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1969	704	620	919	834	933	976	1,019	1,058	1,077	928	806	929	10,804
1970	827	795	944	880	948	1,049	1,023	1,089	1,093	932	833	1,048	11,459
1971	727	718	1,026	860	894	1,087	1,034	1,121	1,123	947	903	997	11,439
1972	823	727	1,058	811	978	1,096	1,001	1,167	1,106	865	855	1,039	11,528
1973	787	740	1,058	892	988	1,063	1,027	1,203	1,026	942	890	919	11,538
1974	959	867	924	901	1,040	996	1,060	1,135	1,003	1,045	879	469	11,273
1975	514	552	693	832	870	961	1,205	1,005	936	916	767	877	10,127
1976	769	778	980	881	928	997	983	1,038	1,055	858	827	828	10,924
1977	832	764	1,024	898	878	1,030	976	1,130	1,005	914	958	833	11,242
1978	766	775	930	864	891	1,033	905	1,122	1,020	894	853	840	10,892
1979[2]	835	771	960	808	890	944	919	1,099	856	921	874	837	10,788
1980[2]	782	829	843	765	936	875	907	900	905	808	701	946	10,838
1981[2]	754	743	1,004	878	943	1,031	997	985	1,099	861	842	785	10,922
1982[2]	648	647											

[1] Includes for domestic consumption and for export. [2] Preliminary. *Source: Department of Agriculture*

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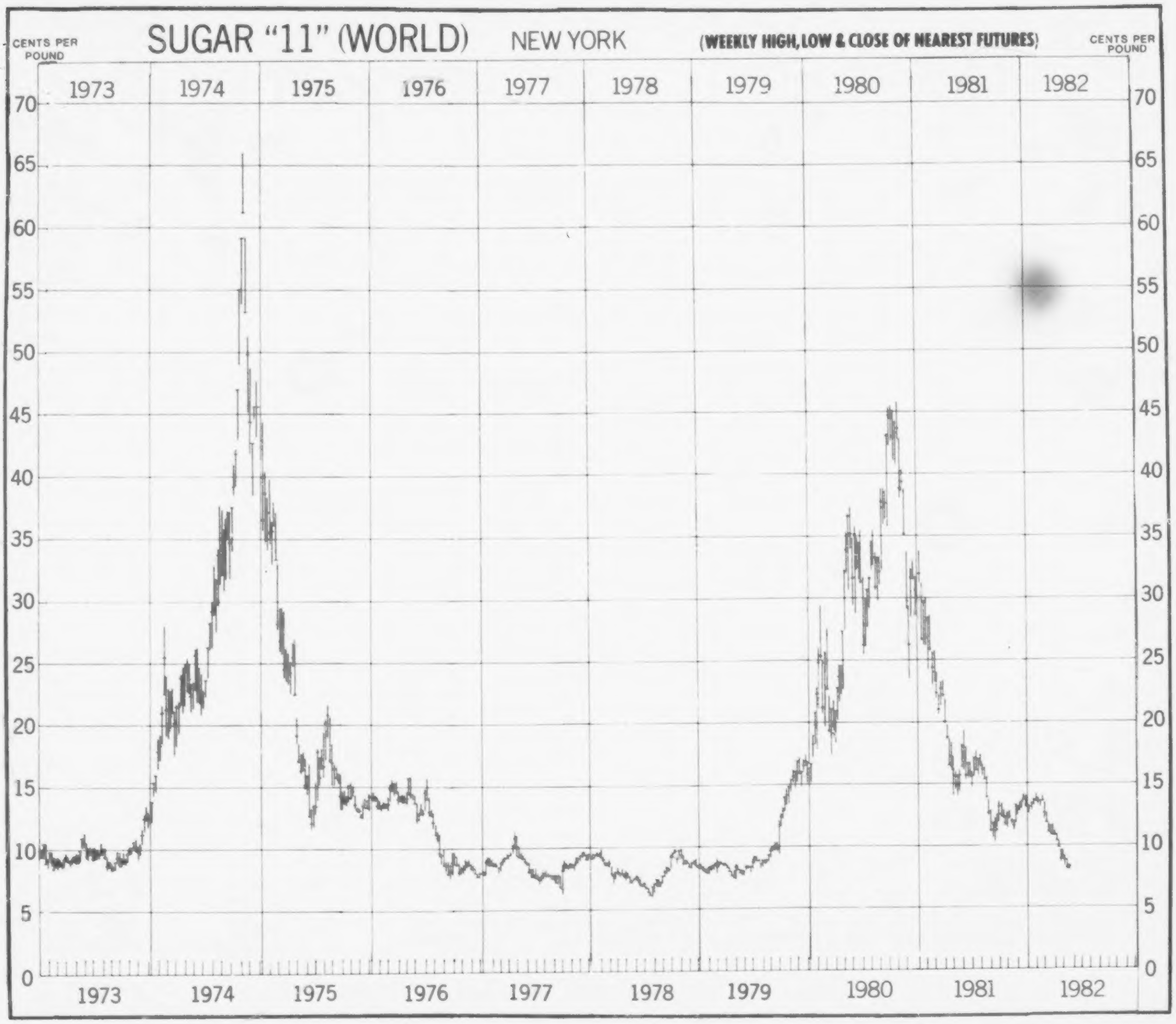


Month End Open Interest of World Sugar (#11) Futures at New York In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	41,918	32,736	30,260	31,558	34,902	34,186	35,419	34,381	30,702	31,290	30,439	31,498
1979	35,004	34,529	36,200	31,824	36,521	39,646	44,938	58,184	61,442	73,701	87,182	92,007
1980	103.041	87,843	68,667	61,126	69,666	68,554	68,996	70,993	71,316	79,313	76,754	64,740
1981	61,522	57,087	59,025	54,898	62,330	61,022	66,730	64,604	52,740	60,761	66,399	72,326
1982	76,623	60,990	65,457	57,719								

Source: Coffee, Sugar & Cocoa Exch., Inc., N.Y.

Volume of Trading of World Sugar (#11) Futures at New York In Contracts

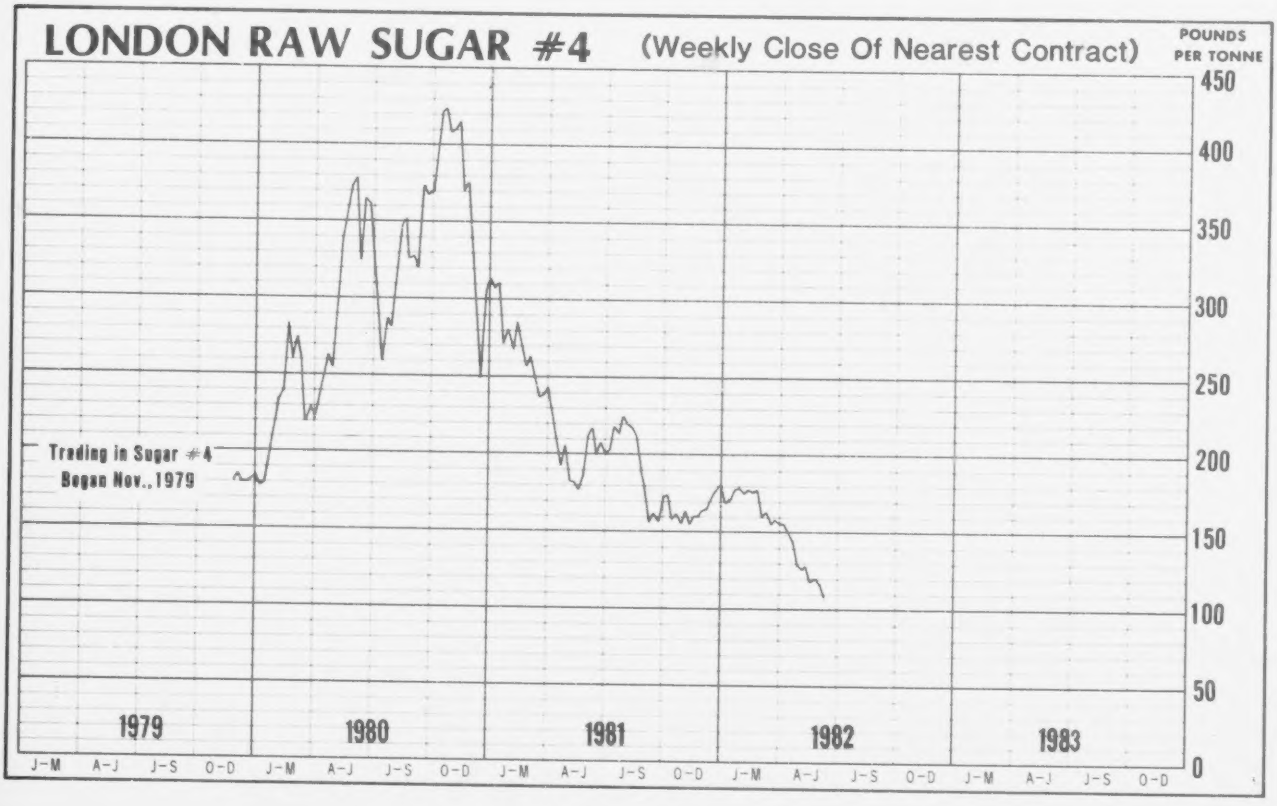
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	61,854	70,103	86,634	79,359	65,623	98,323	75,940	116,271	115,808	99,632	75,243	71,983	1,016,773
1979	72,961	107,951	76,267	82,804	64,224	132,200	121,474	142,006	192,220	255,858	278,458	256,919	1,783,342
1980	381,805	354,441	338,118	245,233	309,417	277,846	271,884	279,149	317,170	295,673	250,627	255,379	3,576,702
1981	233,217	237,286	212,519	240,420	212,708	241,736	192,142	203,404	247,160	138,529	137,768	183,438	2,470,327
1982	166,913	209,386	199,263	217,689									

Source: Coffee, Sugar & Cocoa Exch., Inc., N.Y.

High, Low & Closing Prices of March World Sugar (#11) At New York In Cents per Pound

Year of Delivery		Year Prior to Delivery												Delivery Year		Life of Delivery Range
		Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	
1979	High	11.03	11.03	10.67	10.18	9.53	9.11	8.95	7.70	8.14	9.38	9.88	9.38	9.04	8.58	8.74	11.03
	Low	10.56	10.56	10.10	8.64	8.78	8.32	7.72	6.55	6.89	8.22	8.70	8.37	8.27	7.91	7.94	6.55
	Close	10.90	10.68	10.13	9.43	9.04	8.72	7.75	6.90	8.11	9.23	9.42	8.48	8.43	8.22	8.12	—
1980	High	10.27	9.94	10.30	10.15	9.74	9.72	10.14	10.58	10.91	12.10	14.64	16.91	17.40	22.05	29.45	29.45
	Low	9.76	9.44	9.71	9.55	9.12	9.20	9.29	9.74	9.94	10.50	11.56	14.16	14.85	15.10	19.75	9.12
	Close	9.86	9.75	10.09	9.74	9.45	9.38	9.96	10.07	10.69	11.56	14.08	16.86	16.31	22.01	23.20	—
1981	High	17.06	22.42	28.50	30.08	28.00	39.45	39.38	38.35	37.30	42.20	45.05	45.75	33.75	33.85	28.60	45.75
	Low	15.50	15.56	22.35	21.70	22.60	28.00	33.30	28.17	32.40	33.90	40.85	35.05	24.50	26.15	23.00	13.75
	Close	16.41	22.38	27.37	23.53	27.20	37.94	38.34	32.25	35.07	41.16	43.34	35.11	30.58	26.79	23.25	—
1982	High	28.20	27.68	26.18	22.20	20.30	17.85	19.00	17.95	16.80	13.60	13.36	13.28	14.06	14.10	13.98	36.60
	Low	23.75	23.85	22.10	19.35	16.65	15.40	16.05	15.85	13.25	11.75	11.50	11.67	12.52	12.64	12.23	11.50
	Close	25.68	24.50	22.13	20.08	17.43	17.85	16.05	16.98	13.26	13.11	12.52	13.01	13.18	13.58	12.63	—
1983	High	15.15	15.25	15.05	13.68	12.51											
	Low	13.98	14.03	13.49	12.18	10.28											
	Close	14.71	14.90	13.65	12.49	10.52											

Source: Coffee, Sugar & Cocoa Exch., Inc., N.Y.



Sulfur

Sulfur is one of the most important industrial raw materials. Its consumption is regarded as a good index of a nation's industrial development. About 60 percent of the consumed sulfur is used in the manufacture of fertilizer. The remainder is used in a wide variety of applications because most products produced by industry require sulfur in one form or another during some stage of their manufacture. Most of the sulfur consumed is in the form of sulfuric acid.

U.S. production of Frasch and recovered sulfur in 1981 was 1 percent higher than in 1980, according to U.S. Bureau of Mines data. But shipments decreased 12 percent, and producers' stocks at the end of 1981 were 17 percent larger than a year earlier.

The average shipment value of Frasch and recovered elemental sulfur was about 25 percent higher in 1981 than in the previous year.

World Production of Elemental Sulfur (Native & Other Elemental [All Forms]) In Thousands of Metric[4] Tons

Year	Argentina	Spain	Chile	China	France[3]	W Germany	Canada	Italy	Japan	Mexico	Poland	USSR	Israel	Turkey	United States	World Total
1972	42		77	N.A.	1,703	216	6,839	164	491	929	2,881	3,838	10	21	9,240	28,209
1973	35	1,207	30	N.A.	1,826	538	7,998	1,151	2,723	1,646	3,741	7,520	10	66	10,921	47,437
1974	47	1,393	55	N.A.	2,068	1,284	7,772	776	2,765	2,312	4,326	7,770	8	98	11,419	50,345
1975	32	1,349	47	N.A.	1,962	1,262	7,417	692	2,450	2,181	5,001	7,854	10	90	11,259	49,397
1976[4]	39	1,180	48	1,350	1,968	1,363	7,261	612	2,649	2,225	5,210	9,140	10	128	10,879	50,908
1977	47	1,238	61	1,752	2,160	1,627	7,483	666	2,825	1,949	5,150	9,740	10	118	10,727	52,383
1978	38	1,201	52	2,155	2,146	1,620	7,247	645	2,728	2,086	5,421	10,550	10	122	11,175	53,948
1979	20	1,152	104	2,282	2,190	1,811	7,027	591	2,894	2,374	5,195	10,550	10	114	12,101	55,207
1980[1]	20	1,240	78	2,300	2,077	1,800	7,405	604	2,900	2,552	4,850	10,900	10	114	11,839	56,077
1981[2]		1,300			2,000	1,800	7,500	600	2,800	2,600					12,400	56,900

[1] Preliminary. [2] Estimate. [3] Content of ore. [4] Data prior to 1976 are in THOUSANDS OF LONG TONS. *Source: Bureau of Mines*

Salient Statistics of Sulfur in the United States In Thousands of Metric[6] Tons of Sulfur Content

	Production of												
	Native Sulfur[2]			Recovered Elemental Brimstone	Pyrites (Includ. Coal Brasses)	By-product Sulfuric Acid[3]	Other Sulf. Acid Compounds	Production (All Forms)	Imports—Pyrites & Sulfur	Producers' Stocks Dec. 31[4]	Exports (Sulfur)	Apparent Consumption (All Forms)	Value $ Metric Ton Elem. Sulfur F.O.B. Mine/Plant
	Frasch-Process Total	Mines											
Year		Louisiana	Texas										
1972	7,290	3,534	3,755	1,950	283	546	149	10,218	1,188	3,796	1,852	9,854	17.03
1973	7,605	3,311	4,294	2,416	212	600	88	10,921	1,222	3,927	1,776	10,235	17.84
1974	7,901	3,308	4,593	2,632	162	654	70	11,419	2,150	3,957	2,663	10,818	28.88
1975[6]	7,327	3,119	4,208	3,017	241	779	76	11,440	1,927	5,208	1,316	10,773	45.63
1976	6,365	2,527	3,838	3,188	291	957	78	10,879	1,755	5,652	1,217	10,941	45.72
1977	5,915	2,461	3,454	3,624	169	960	59	10,727	2,009	5,557	1,088	11,657	44.38
1978	5,648	1,928	3,720	4,062	301	1,103	61	11,175	2,177	5,345	827	12,600	45.17
1979	6,357	2,460	3,897	4,070	400	1,167	107	12,101	2,494	4,239	1,963	13,739	55.75
1980[1]	6,390	2,309	4,081	4,046	322	1,003	78	11,839	2,523	3,091	1,673	13,635	88.93
1981[5]	6,500			4,300				12,400	2,600	3,300		13,300	111.00

[1] Preliminary. [2] Or sulfur ore. [3] Basis 100%—produced at Cu, Zn, & Pb plants. [4] Frasch & recovered sulfur. [5] Estimates. [6] Data prior to 1975 are in THOUSANDS OF LONG TONS. *Source: Bureau of Mines*

Sulfur Consumption & Foreign Trade of the United States In Thousands of Metric[5] Tons

		Apparent Consumption of Sulfur in All Forms[3]									Foreign Trade			
											Exports		Imports	
Year	Net Import Reliance as a % of Apparent Consumption	Native Sulfur (Frasch)	Recovered Sulfur Sales	Total Pyrites	Smelter Acid Prod.	Other Prod.[2]	Total	Imports of Recovered Sulfur	Sales to Consumers of Native Sulfur	Imports of Native Sulfur	Quantity	Value Ths. $	Quantity	Value Ths. $
1972		6,030	1,927	333	546	149	9,854	869	7,613	269	1,852	33,687	1,188	16,288
1973		5,964	2,451	212	600	88	10,235	920	7,438	302	1,776	35,791	1,222	14,871
1974		6,251	2,547	162	654	70	10,818	1,196	7,898	954	2,663	97,345	2,150	51,124
1975[5]		5,841	2,929	241	779	76	10,773	945	6,175	982	1,316	71,801	1,927	70,848
1976	—	5,480	3,196	291	957	78	10,941	1,012	5,954	743	1,217	63,584	1,755	59,494
1977	6	5,723	3,627	169	960	59	11,657	1,228	6,030	781	1,088	52,111	2,009	65,154
1978	12	5,902	4,088	301	1,103	61	12,600	1,185	5,736	993	827	34,667	2,177	75,671
1979	11	6,773	4,108	400	1,167	107	13,739	1,265	7,507	1,229	1,963	142,966	2,494	94,147
1980[1]	14	6,717	4,091	322	1,003	78	13,635	1,533	7,400	990	1,673	185,866	2,523	138,852
1981[4]	7													

[1] Preliminary. [2] Includes hydrogen sulfide, liquid sulfur dioxide. [3] Crude sulfur equivalent. [4] Estimate. [5] Data prior to 1975 are in THOUSANDS OF LONG TONS. *Source: Bureau of Mines*

Sunflower Seed and Oil

World production of sunflower seeds in 1981/82 was estimated by the USDA at 13.85 million tonnes, 4 percent above 1980/81 production of 13.25 million, and 11 percent below the 1979/80 production of 15.43 million. The 1981/82 increase in production versus 1980/81 reflected higher output in several key producing areas compared with the previous season. U.S. production increased by 20 percent, and Argentine production by 23 percent. Adverse weather reduced the U.S.S.R. crop size, and the 1981/82 crop was estimated at 4.6 million tonnes, or one percent lower than the disastrous 1980/81 harvest. U.S. exports increased continually from the mid-1970s to 1981. Western Europe provides the most important market for U.S. exports.

Sunflower seed is relatively high in oil content (40 percent oil, 55 percent meal) compared to other oilseeds (soybeans—18 percent oil, 80 percent meal), and therefore its meal content is less important.

U.S. sunflower seed supplies for 1981/82 (September-August) were estimated at 2.4 million tonnes vs. 2.8 million in 1980/81. The 1981/82 U.S. crop was estimated at 2.1 million tonnes, or 20 percent above the previous season. Expected improved yields were the primary reason for the projected increase in production. Higher 1980/81 exports were expected to result in an August 31, 1982 carryover of about 120 thousand tonnes.

Even though domestic crushing was rising rapidly, the bulk of U.S. sunflower seed production was still exported as seed. In 1980/81, exports accounted for 61 percent of the disposition of sunflower seed. In each of the 4 previous years, exports of sunflower seed ran between 70 and 75 percent. In 1981/82 U.S. trade was estimated at 1.4 million metric tons, down slightly from the previous season's 1.5 million. Even with the expected reduction, the United States would continue as the world's leading sunflower seed exporter. The largest market for U.S. sunflower seed exports is the E.C., taking about 60 percent of the total.

Futures Markets

Sunflower seed futures are listed but not actively traded on the Minneapolis Grain Exchange.

Sunflower Seed Statistics in the United States

Crop Year	Acres Harvested In Ths.	Yield per Harv. Acre Pounds	Farm Price $ Metric Ton	Value of Production Mil. $	Supply: Production	Supply: Imports	Supply: Stocks Sept. 1	Supply: Total	Disappearance: Crushings	Disappearance: Exports	Disappearance: Non-Oil Usage	Disappearance: Seed	Disappearance: Residual	Disappearance: Total
					In Thousands of Metric Tons									
1975–6	709	1,109	238	85.0	544	2	33	546	180	273	91	2	–82	546
1976–7	810	1,058	243	94.2	499	2	501	35	337	103	3	11		478
1977–8	2,205	1,252	224	280.4	1,330	3	23	1,356	219	942	113	5	175	1,279
1978–9	2,798	1,365	236	409.9	1,823	7	77	1,907	292	1,366	150	9		1,817
1979–0	5,410	1,349	200	660.0	3,409	10	90	3,509	547	1,820	—162—			2,529
1980–1[1]	3,683	1,016	245	410.4	1,748	28	980	2,756	780	1,505	—167—			2,452
1981–2[1]	3,811	1,177	250	524.5	2,098	28	304	2,430	750	1,400	—160—			2,310
1982–3														

[1] Preliminary. *Source: Economic Research Service; U.S.D.A.*

Sunflower Seed Oil Statistics in the United States In Millions of Pounds

Crop Year Begin. Oct.	Supply: Stocks Oct. 1	Supply: Production	Supply: Total	Disappearance: Exports & Shipments	Disappearance: Domestic Disappearance	Disappearance: Total	Price $ per Metric Ton (Crude Mpls.)
1975–6	—	72	72	48	16	64	—
1976–7	8	14	22	15	7	22	243
1977–8	—	86	86	34	49	83	
1978–9	3	115	118	41	70	111	728
1979–0	7	224	231	86	72	158	572
1980–1	73	298	371	301	29	330	594
1981–2[1]	41	294	335	260	50	310	535
1982–3[2]	25						

[1] Preliminary. [2] Estimate. *Source: Economic Research Service; U.S.D.A.*

World Production of Sunflower Seed In Thousands of Metric Tons

Crop Year	Argentina	Australia	Bulgaria	Canada	China	France	Hungary	Romania	South Africa	Spain	Turkey	United States	USSR	Yugoslavia	World Total
1977–8	1,600	80	423		200		211	807	447	388	455	1,330	5,904	479	12,877
1978–9	1,430	186	369	120	279	82	223	816	312	470	485	1,823	5,333	539	12,902
1979–0	1,650	159	415	218	340	159	417	888	329	504	550	3,409	5,414	525	15,419
1980–1[1]	1,200	143	378	166	908	220	460	817	520	488	630	1,697	4,652	302	13,237
1981–2[2]	1,750		440		1,000		550	806	450	350	575	2,035	4,600	290	14,131

[1] Preliminary. [2] Estimate. *Source: Foreign Agricultural Service, U.S.D.A.*

Tall Oil

Tall Oil—Supply & Distribution in the U.S. In Millions of Pounds

	Supply			Disposition										
						Non Food Products								
Year Beginning Oct. 1[3]	Production	Stocks Oct. 1[4]	Total Supply	Exports	To U.S. Territ.	Soap	Paint & Varnish	Linoleum & Oilcloth	Resins & Plastics	Other Drying Oils	Lubricants & Similar Oils	Fatty Acids	Other	Total Nonfood Products
1968	1,239	172	1,411	97	—	9	52	15	1	41	10	1,144	16	1,288
1969	1,284	184	1,468	125	—	4	41	16	—	31	10	1,154	12	1,269
1970[3]	1,271	140	1,411	145	.2	3	42	—	—	32	8	1,023	41	1,118
1971	1,299	148	1,447	165	.1	3	46	—	—	28	8	1,033	41	1,132
1972	1,326	150	1,476	173	.2	3	45	—	—	—	9	1,062	43	1,163
1973	1,235	139	1,374	219	.3	3	42	—	—	—	8	967	42	1,062
1974	1,054	93	1,147	120	.1	2	33	—	—	—	7	783	33	858
1975–6[1]	1,176	169	1,345	233	1.6	3	39	—	—	—	7	861	42	953
1976–7[1]	1,181	148	1,329	176		7								1,015
1977–8[2]	350	169	519	168		3								230
1978–9[2]	191	166	357	107		3								87
1979–0														

[1] Preliminary. [2] Estimated. [3] Data prior to 1970 are for the CALENDAR YEAR. [4] Prior to 1970 data are for JAN. 1.
Source: Agricultural Marketing Service, U.S.D.A.

Tall Oil Domestic Disappearance in the United States, Beginning of Month In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1970	106.9	83.1	94.8	100.8	101.5	89.7	76.1	101.1	96.2	100.4	93.3	81.7	1,126
1971	102.2	88.3	82.0	93.0	90.8	106.2	92.3	90.9	96.6	88.2	107.7	72.6	1,111
1972	95.8	92.8	105.4	91.9	95.6	92.8	88.7	104.4	95.8	102.4	88.9	74.0	1,129
1973	102.0	77.2	106.2	96.6	107.6	87.0	105.4	115.3	100.2	103.6	104.6	81.0	1,187
1974	98.6	77.5	90.5	86.8	92.9	81.4	90.5	84.0	70.6	83.1	82.5	84.0	1,022
1975	62.5	85.4	31.9	55.1	63.3	78.1	62.4	80.3	89.5	77.6	68.2	71.2	825
1976[1]	65.7	91.0	87.2	70.4	101.5	82.8	69.4	98.9	68.6	80.8	79.4	79.5	975
1977[1]							46.8	72.6	82.5	89.0	84.4	89.8	
1978[1]	-9.3	-13.2	19.6	-3.0	-4.9	1.9	8.1	-5.3	-2.7	4.4	1.6	17.1	
1979[1]	16.1	23.0	-19.4	10.3	19.0	29.3	-26.6	-13.0	25.5	17.1	-22.9	-7.3	
1980[1]	-18.7	2.3											

[1] Preliminary. *Source: Statistical Reporting Service, U.S.D.A.*

U.S. Average Wholesale Price of Tall Oil, Crude (Tanks-Works) In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1968	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
1969	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
1970	3.4	3.4	3.4	3.4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
1971	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
1972	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	4.1	4.3	3.8
1973	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.2
1974	4.3	4.3	4.3	5.6	6.3	6.3	7.5	7.8	9.0	11.4	11.3	11.3	7.4
1975	13.4	13.4	10.9	9.0	8.3	7.3	6.0	5.8	5.8	5.8	5.9	6.0	8.1
1976	6.1	6.3	6.3	5.8	5.8	5.8	5.5	5.5	5.5	6.0	6.0	6.0	5.9
1977	6.6	6.6	6.6	7.0	7.0	7.0	7.0	7.1	7.1	7.1	7.1	7.2	7.0
1978	7.4	7.5	7.5	7.8	7.8	7.8	7.8	7.5	7.5	7.5	7.5	7.6	7.6
1979	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8
1980	7.8	7.8	7.8	7.8	7.8	7.8	7.8						
1981													

Source: Economic Research Service, U.S.D.A.

Tallow and Greases

Edible tallow production for 1981/82 was projected by the USDA in early 1982 at 1.18 billion pounds—5 percent above 1980/81. This estimate placed edible tallow production more than 100 million pounds above lard output because beef production was expected to increase slightly and hog production to drop sharply. Furthermore, edible tallow production has increased rapidly in recent years because more beef carcasses are being cut up into retail-size portions (boxed beef) at packing plants.

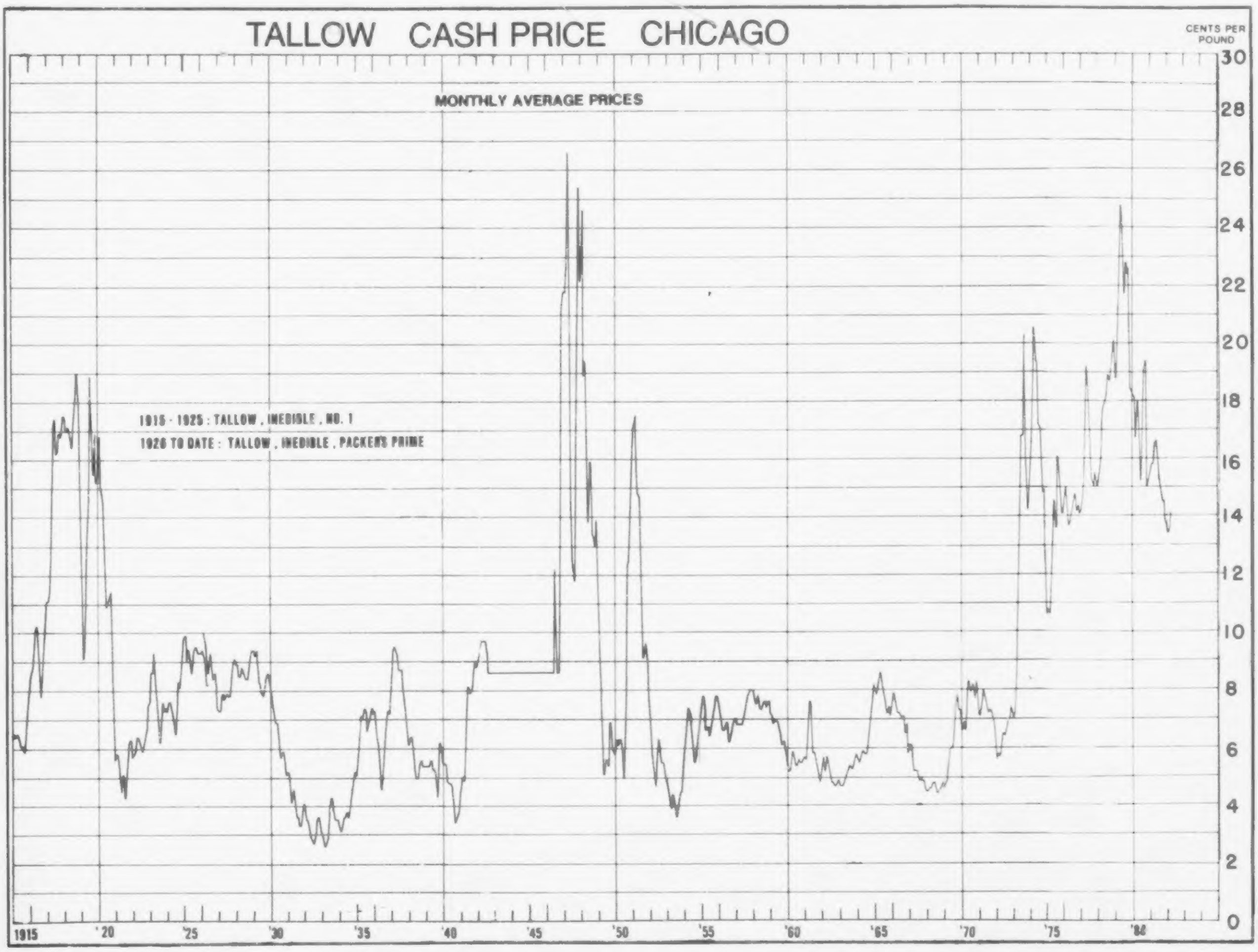
Domestic use of edible tallow in 1981/82 was projected by the USDA to increase to 1.05 billion pounds. This would follow a 9 percent increase in domestic use in 1980/81. The increased consumption was partly replacing domestic lard use. Edible tallow is primarily used in commercial and institutional shortening products.

Exports of edible tallow reached 133 million pounds in 1980/81, almost double 1979/80 exports. Production continued to increase. Domestic use increased, but not enough to make up for the reduced exports, thereby resulting in a buildup of stocks. Edible tallow prices (Chicago) carried a slight premium over lard during 1980/81.

Production of inedible tallow and grease was forecast to decline slightly in 1981/82. Hog slaughter was expected to be down sharply. In 1980/81, domestic use of inedible tallow and grease was up slightly from the previous year, to about 3.015 billion pounds.

Exports of inedible tallow and grease totaled almost 3.0 billion pounds in 1980/81, slightly under 1979/80's 3.1 billion. Exports of significant quantities of inedible tallow and grease go to many countries. Major export markets in 1980/81 were: Egypt, 15 percent; the Netherlands, 8; Soviet Union, 8; Republic of Korea, 7; Japan, 7; Pakistan, 6; and Mexico, 5. These 7 countries took 56 percent of the U.S. total in 1980/81. The Soviet Union, India, and the Netherlands significantly increased their U.S. purchases.

Inedible tallow prices (bleachable, fancy, Chicago) remained relatively stable at about 18 cents-a-pound during most of 1980/81. Total U.S. fat production, which includes butter (fat content), lard, and tallow and grease, was estimated at 4.19 million tonnes for the 1981/82 season, versus 4.25 million for 1980/81. Projected reduction in livestock slaughter were cited as the reason for the expected slight decline.



TALLOW AND GREASES

World Production of Tallow and Greases (Edible and Inedible) In Thousands of Metric Tons

Year	Argentina	Australia	Brazil	Canada	Colombia	U.S.S.R.	France	W. Germany	Italy	Mexico	Netherlands	New Zealand	United Kingdom	United States	Eastern Europe	World Total
1969	153.9	188.4	75.4	150.5	20.4	305.0	122.0	116.0	66.5	20.4	28.8	95.6	137.2	2,354	93.5	4,180
1970	140.1	192.5	69.5	179.8	21.5	298.4	126.0	127.0	65.4	21.6	33.6	94.0	147.3	2,478	91.7	4,354
1971	128.9	213.3	70.5	199.6	23.8	304.7	144.0	161.0	66.3	21.2	33.2	92.1	147.3	2,609	91.7	4,579
1972	137.6	244.4	73.0	204.4	22.0	309.9	147.0	135.0	63.8	21.4	32.6	94.0	138.2	2,550	89.2	5,528
1973	135.5	247.7	75.0	204.5	19.6	316.3	157.0	135.0	66.0	22.8	33.9	99.5	132.1	2,412	100.5	5,121
1974[1]	140.7	197.8	62.5	208.7	17.6	335.8	179.0	150.0	88.0	27.3	45.2	95.1	162.6	2,912	102.2	4,723
1975[1]																5,294
1976[1]																5,471
1977[1]																5,800
1978[1]																5,600
1979[1]																5,550
1980[1]																5,550
1981[1]																

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[1] Preliminary. *Source: Foreign Agricultural Service, U.S.D.A.*

Salient Statistics of Tallow and Greases (Inedible) in the United States In Millions of Pounds

	Supply				Exports & Shipments	Utilization in Nonfood Products						Wholesale Prices, ¢ Per Lb.	Inedible		
													Chicago		
Year	Apparent Production[2]	Imports	Stocks Jan. 1	Total		Soap	Animal Feed	Fatty Acids	Lubricants & Oils	Other	Total[3]	Edible, (Loose) Chicago	No. 1	Bleachable Fancy	N.Y. Special, Tanks
1969	4,655	6	358	5,019	1,896	635	1,078	608	101	173	2,775	9.3	6.0	6.8	5.8
1970	4,905	7	348	5,260	2,242	602	1,098	585	96	240	2,622	11.2	7.1	8.1	7.6
1971	5,210	5	396	5,611	2,607	588	1,143	585	81	226	2,623	10.8	6.6	7.7	7.1
1972	5,078	2	380	5,460	2,357	640	1,116	698	83	206	2,762	10.1	6.0	7.0	6.1
1973	4,843	10	341	5,194	2,299	566	1,077	899	111	270	2,540	18.4	12.4	14.9	7.2
1974	5,664	12	356	6,032	2,623	632	962	750	92	207	3,029	26.8	15.2	18.2	N.A.
1975	4,801	15	380	5,196	2,011	662	1,287	698	115	149	2,908	24.3	12.0	14.2	
1976	5,774	9	277	6,060	2,337	764	1,396	817	142	164	3,367	16.5	13.2	15.0	
1977	5,981	4	355	6,340	2,893	737	1,397	764	128	158	3,099	21.2	13.6	17.1	
1978	5,871	3	344	6,218	2,698	695	2,489				3,184	22.8	16.0	19.8	
1979[1]	5,956	3	347	6,306	2,795	663	2,454				3,117	26.2	18.8		
1980[4]	6,110		422		3,254	617	1,308	813	69	177	2,984	21.6	14.3		
1981															

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[1] Preliminary. [2] Apparent production based on reported factory production, net foreign trade, & change in stocks. Reported factory production excludes that from small rendering plants. [3] Includes small amounts used in drying-oil products in some years. [4] Estimate. *Sources: Economic Research Service, U.S.D.A.; Bureau of Labor Statistics*

Average Wholesale Price of Tallow, Inedible, Packers (Prime), C.A.F. Chicago In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1969	4.8	4.9	5.6	6.0	6.0	6.3	6.8	7.6	7.8	7.3	7.3	6.6	6.4
1970	6.9	6.6	7.4	8.1	8.3	7.9	8.1	8.2	7.7	8.3	8.0	7.2	7.7
1971	7.1	7.6	8.0	7.8	7.6	7.4	7.2	7.3	7.2	7.0	6.7	5.6	7.2
1972	5.8	5.7	5.8	6.5	6.5	6.4	6.6	6.9	7.0	7.4	7.2	7.0	6.6
1973	7.2	8.6	10.1	11.8	14.3	16.8	16.8	20.3	15.9	14.6	14.2	15.4	13.8
1974	16.6	19.4	20.5	19.4	19.3	17.2	17.1	17.0	14.8	14.9	14.3	10.8	16.8
1975	10.6	10.8	10.6	12.2	13.6	14.6	13.6	16.1	15.9	14.9	14.5	14.1	13.5
1976	14.1	14.4	15.0	13.7	13.9	14.2	14.8	14.2	14.4	14.1	14.1	14.3	14.3
1977	14.7	14.9	15.9	17.6	19.2	17.6	16.9	15.3	15.0	15.5	15.3	15.0	16.1
1978	15.4	16.0	17.3	17.8	17.9	18.2	18.9	18.7	19.5	19.8	20.1	18.8	18.4
1979	19.8	20.8	22.9	24.8	24.1	21.7	22.8	22.4	22.6	20.9	18.4	18.2	21.6
1980	18.1	16.7	17.5	18.0	16.8	15.2	16.8	19.0	19.4	17.5	20.4	19.0	17.9
1981	15.8	15.8	16.0	16.5	16.6	16.0	15.2	15.0	14.5	14.5	13.9	13.6	13.6
1982													

Source: Economic Research Service, U.S.D.A.

Tea

World tea production (including fermented black and unfermented green) in 1981 was estimated at 1.86 million tons, compared with 1.82 million in 1980. The slight increase was largely due to increases in China, Sri Lanka, and Indonesia. Despite the somewhat improved world supply picture for 1981, growth in tea output in recent years has been sluggish because of the squeeze of rising production costs and relatively stable tea prices.

Asian tea production in 1981 was estimated at 1.37 million tons, almost three-fourths of world output. China's 1981 tea outturn was estimated at 324,000 tons, compared with 304,000 tons in 1980. This significant upturn was largely attributed to new areas planted within the past 3–5 years that are now coming into bearing. Sri Lanka harvested an estimated 210,000 tons, up almost 10 percent from the year before because of favorable weather and improved management on many of the larger estates. Tea output during 1981 in Bangladesh (41,100 tons), Indonesia (78,900 tons), and Japan (105,000 tons) was up 3 to 9 percent over 1980 levels.

In contrast, production in India—the world's largest producer—was estimated to have fallen to 573,500 tons from 575,900 tons in 1980. Although production in northern India was up, adverse weather and a slowdown in fertilizer use caused a downturn in output in southern India.

African tea production for 1981 was estimated at 197,900 tons, up slightly from the previous year. Kenya—Africa's largest producer—harvested an estimated 90,900 tons. Malawi's tea output was up 7 percent to 32,000 tons.

In the United States, iced tea is credited with accounting for over 80 percent of the market, as hot tea consumption continues to decline. Coffee is tea's major competitor in the hot beverage market, while soft drinks offer the greatest competition for iced tea.

Salient Statistics of Tea in the United States In Millions of Pounds

	U.S. Imports: (In Thous. Metric Tons[2])														Domestic Disappearance			
Year	Brazil	Argentina	Sri Lanka (Ceylon)	China	India	Indonesia	Japan	Kenya	Mozambique	Netherlands	Malawi	Taiwan	Total	Total Supply	Military	Civilian	Per Capita per Lb.
1969			51.8		19.3	20.6	2.9	12.3	3.0	6.3	5.8	4.7	140.0	204	2	145	.73
1970			46.1		15.8	21.4	2.8	15.2	2.4	6.3	5.1	5.3	137.2	192	3	146	.72
1971			54.8		22.8	25.4	2.6	21.4	3.9	8.7	7.4	8.0	175.4	217	2	158	.77
1972			42.9		16.8	21.7	3.9	14.6	4.6	7.6	6.9	8.2	151.5	207	3	160	.77
1973[3]		1.1	19.7	.6	8.2	13.3	2.1	8.4	3.1	5.1	2.7	3.2	78.9	216	2	165	.79
1974		1.8	19.6	1.2	7.5	13.3	1.9	7.9	3.1	6.4	3.2	3.3	80.9				.80
1975		1.8	18.3	2.0	6.8	12.9	1.7	8.4	2.7	2.4	2.2	4.0	72.3				.80
1976		2.1	21.1	3.0	8.0	11.6	3.2	10.7	2.0	1.3	4.1	4.8	82.2				.81
1977		4.9	16.6	4.2	12.3	14.7	3.4	9.5	2.3	3.0	5.6	5.7	92.1				.90
1978	2.0	6.7	14.0	2.9	1.7	10.7	3.2	8.2	1.4	4.1	4.2	3.0	68.8				.70
1979	3.5	7.0	14.7	6.5	5.9	11.2	2.9	9.4	2.4	4.7	2.5	2.3	79.2				.70
1980[1]	2.8	10.3	12.2	8.0	4.2	13.9	2.5	6.8	5.0	5.9	2.1	3.1	83.8				.68
1981																	

[1] Preliminary. [2] Imports prior to 1973 are in MILLIONS OF POUNDS. *Sources: Statistical Reporting Service, U.S.D.A.; Bureau of Census*

N.Y. Wholesale Price of Tea (Black)[1] In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1969	43.9	44.0	43.6	42.9	42.3	42.4	41.0	42.0	41.9	41.2	42.1	43.4	42.6
1970	43.9	44.2	44.6	44.8	45.3	45.4	45.8	47.1	47.8	47.5	45.9	47.7	45.8
1971	48.1	47.8	48.8	48.1	48.3	47.7	48.1	48.1	49.7	49.5	49.6	50.7	48.7
1972	50.3	50.8	53.0	53.5	53.5	52.1	51.0	49.1	49.6	49.5	47.8	47.6	50.7
1973	46.8	47.9	48.6	48.8	48.9	48.2	48.7	48.8	48.0	48.0	48.0	48.3	48.3
1974	49.1	50.4	58.2	62.7	62.3	64.7	63.8	64.9	64.4	65.3	66.9	71.4	62.0
1975	71.3	73.9	75.5	72.1	69.4	68.7	65.3	65.0	63.6	65.4	65.9	66.4	68.5
1976	66.1	66.7	67.3	67.1	68.2	71.4	75.9	82.4	81.7	81.3	80.3	82.5	74.2
1977	N.A.	99.9	136.8	211.4	191.6	157.9	144.2	136.0	129.4	116.1	116.8	112.1	141.1
1978	109.9	122.1	121.5	115.1	110.4	109.4	109.6	108.8	107.4	110.3	110.5	106.6	111.8
1979	108.9	107.0	105.3	102.1	99.9	96.4	97.5	97.8	102.0	105.9	103.3	101.8	102.3
1980	103.9	108.9	110.3	110.0	109.3	106.3	106.6	107.1	107.8	N.A.	104.6	103.6	107.1
1981	103.3	107.3	108.4	108.9	106.8	106.3	104.3	103.7	100.4	99.3	99.6	99.5	104.0
1982	96.7	98.3											

[1] Medium broken grade from Ceylon & India; ex-dock or ex-warehouse. *Source: Bureau of Labor Statistics* (0191–0331)

TEA

World Tea Production, in Major Producing Countries In Thousands of Metric Tons

Year	Argentina	China	Sri-Lanka (Ceylon)	India	Indonesia	Iran	Japan	Kenya	Malawi	Mozambique	Bangladesh	Taiwan	Turkey	Uganda	USSR	World Total
1969	20.0	N.A.	219.6	396.0	44.1	19.0	89.6	36.1	16.9	16.0	30.0	26.2	34.4	17.6	59.9	1,062
1970	18.5	N.A.	212.2	418.5	44.0	16.0	91.2	41.1	18.7	17.0	31.4	27.6	33.4	18.2	66.8	1,098
1971	25.0	N.A.	217.8	435.5	48.2	24.0	92.9	36.3	18.6	16.5	12.5	27.0	33.6	18.0	68.6	1,123
1972	24.0	N.A.	213.5	456.0	49.8	22.0	94.8	53.3	20.7	18.7	23.8	26.2	46.5	23.4	71.3	1,197
1973	23.1	N.A.	211.3	472.0	54.5	23.0	101.0	56.6	23.6	18.8	27.6	28.6	43.2	20.4	74.8	1,236
1974	26.0	N.A.	204.0	492.1	51.7	25.0	95.2	53.4	23.3	17.6	32.2	24.2	42.8	21.7	80.8	1,245
1975	29.0	N.A.	213.7	487.1	56.8	23.0	105.4	56.7	26.2	13.1	29.0	26.1	55.6	18.4	86.3	1,284
1976	33.0	N.A.	196.6	511.8	61.1	22.0	100.1	62.0	28.3	13.8	33.3	24.8	59.5	15.4	92.0	1,316
1977	21.6	252.0	208.6	556.3	64.3	24.0	102.3	86.3	31.7	17.0	38.0	26.3	84.1	15.2	106.4	1,709
1978	26.3	268.0	199.0	563.8	73.2	23.0	104.7	93.4	31.7	18.1	38.0	25.9	86.5	10.9	111.2	1,755
1979	32.1	277.1	206.4	551.9	73.3	21.0	98.0	93.3	32.6	19.7	35.9	27.1	102.0	1.8	117.6	1,782
1980[1]	34.0	304.0	191.4	575.9	72.2	20.0	102.3	89.9	29.9	19.0	39.9	24.5	95.9	1.5	129.8	1,816
1981[2]	25.0	324.0	210.1	573.5	78.9	20.0	105.0	90.9	32.0	19.5	41.1	26.0	100.0	1.2	130.0	1,862
1982																

[1] Preliminary. [2] Estimate. *Source: Foreign Agricultural Service; U.S.D.A.*

World Tea Exports from Producing Countries In Thousands of Metric Tons

Year	Sri Lanka (Ceylon)	China	India	Indonesia	Japan	Malaysia	Bangladesh	Taiwan	Total Asia	Kenya	Mozambique	Malawi	Total Africa	Argentina	Grand Total
1969	201.4	32.4	168.7	27.1	1.6	1.5	—	21.3	463.4	33.8	15.4	17.3	98.8	14.6	579.8
1970	208.3	30.0	200.2	36.9	1.6	1.3	—	20.4	509.4	36.1	16.7	17.7	103.5	19.1	636.3
1971	200.8	41.0	204.4	40.2	1.5	1.0	—	22.8	531.7	34.3	17.5	18.2	105.6	22.4	665.5
1972	190.1	42.0	209.8	38.5	1.9	.8	13.2	21.3	535.8	47.4	18.4	19.9	129.3	18.9	688.7
1973	205.5	50.2	188.2	35.6	2.2	.6	20.3	21.1	547.0	51.5	17.9	22.1	137.4	18.0	709.0
1974	185.1	63.6	205.9	50.2	1.8	.6	21.2	17.2	563.6	49.6	17.2	23.8	134.3	24.1	728.3
1975	212.4	61.3	219.4	46.0	2.2	.5	24.1	20.1	592.3	52.6	12.2	24.2	132.6	17.4	747.5
1976	199.7	61.2	237.3	47.5	3.2	.5	30.7	21.1	608.7	59.3	12.9	29.6	142.2	25.1	782.7
1977	185.5	81.8	229.6	51.3	3.5	.5	26.0	20.8	611.1	70.2	12.9	29.9	158.6	26.9	803.1
1978	192.6	86.9	176.1	56.2	3.4	.6	30.9	20.4	576.7	85.0	16.7	30.6	178.1	31.0	795.1
1979	187.5	106.8	199.6	53.6	3.1	.6	31.9	19.3	616.0	94.0	18.2	31.0	180.1	29.6	834.6
1980[1]	184.7	106.0	224.5	74.1	2.7	.6	31.0	18.2	656.0	74.8	18.0	31.3	157.2	32.7	855.6
1981															

[1] Preliminary. *Source: Foreign Agricultural Service, U.S.D.A.*

United States Imports of Tea In Thousands of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1969	1,859	4,046	14,825	16,785	17,989	13,655	11,644	8,892	13,760	11,141	13,593	11,773	139,962
1970	10,826	10,264	15,285	12,767	11,503	10,972	8,940	8,778	10,805	11,971	10,409	12,682	135,202
1971	13,226	12,360	15,073	18,078	15,128	16,529	20,150	25,141	19,427	4,631	3,828	11,862	175,432
1972	12,914	16,907	10,276	10,165	12,885	16,563	10,835	11,581	12,830	14,348	11,460	10,731	151,495
1973	15,481	14,295	15,399	14,107	17,423	12,425	13,660	12,614	12,527	16,878	16,506	11,997	173,314
1974	11,675	14,974	16,583	17,177	18,122	17,489	21,788	16,432	13,954	10,460	7,735	11,844	178,326
1975	14,297	12,200	15,486	13,648	14,694	12,170	9,915	11,276	12,404	17,594	13,940	11,843	159,287
1976	11,842	12,309	15,779	15,805	13,053	13,893	14,259	15,051	19,224	15,683	16,133	18,273	181,304
1977	16,059	15,064	22,389	23,302	27,345	22,335	22,252	15,932	9,994	9,702	7,213	10,924	203,012
1978	9,023	12,791	18,648	15,450	17,523	8,286	13,141	13,788	9,390	12,502	8,877	12,332	151,751
1979	14,797	10,568	15,584	13,822	13,556	14,352	13,361	14,809	15,841	16,992	15,432	15,578	174,690
1980	18,749	17,562	17,456	18,501	15,871	16,460	14,099	11,883	11,870	14,271	12,126	15,936	184,786
1981	12,891	18,354	14,696	19,220	18,990	17,736	14,586	19,128	13,205	15,855	13,473	12,121	190,254
1982	15,055												

Source: Department of Commerce

Tin

The United States is the world's largest consumer of both primary and secondary tin. With domestic production negligible, virtually all primary tin to meet U.S. requirements is imported. The largest use of tin is in metal containers fabricated from tinplate.

U.S. imports of tin metal for consumption in 1981 were about the same as in 1980, according to preliminary data of the U.S. Bureau of Mines. Major suppliers of U.S. tin imports for consumption in 1981 were Malaysia, Thailand, Bolivia, and Indonesia.

Primary tin consumption in the U.S. in 1981 was 19 percent below that of 1980, according to preliminary data of the U.S. Bureau of Mines. Cans and containers accounted for an estimated 20 percent of tin use in 1981; electrical—15 percent; construction—15 percent; transportation—12 percent; other uses—29 percent. An estimated 22 percent of the tin used was derived from secondary materials. U.S. apparent consumption of tin in 1982 is estimated to be somewhat lower than in 1981, influenced by the recession.

The General Services Administration (GSA) continued its daily fixed-price sales program of Government stockpile tin throughout 1981 despite vigorous opposition from producer countries in the International Tin Council (ITC). Starting December 14, 1981, the GSA loosened restrictions on its tin sales program, allowing such tin to be sold to foreign users. This change resulted in a significantly increased sales volume. By March 10, 1982 a total of 8,675 tonnes of stockpiled tin (of 35,000 authorized for sale) had been sold since sales began in July, 1980. As of November 30, 1981, the U.S. government stockpile of some 200,000 tonnes was about five times larger than the stockpile goal.

The Fifth International Tin Agreement, scheduled to expire June 30, 1981, was extended to June 30, 1982. Negotiations continued in early 1982 for the Sixth International Tin Agreement (ITA). A sufficient number of producers had signed or ratified the pact by March 1982 for it to become provisionally in force on July 1, 1982. However, few consuming countries had signed the pact by mid-March. In early 1982, the International Tin Council (ITC) "may buy" range for the buffer stockpile ranged from 32.06 Malaysian ringgits per kilo down to the floor price of 29.15 ringgits. The "may sell" range was 34.98 ringgits to 37.89 per kilo.

In the last half of 1981, continuing into early 1982, the aggressive purchase of large amounts of tin in the cash market and on the London Metal Exchange (LME) by a group variously attributed to some important producing countries and/or to Middle East oil interests drove prices to record highs by late February 1982. But prices later collapsed when buying was withdrawn and selling attributed to this group appeared. Prices dropped to a level which forced ITC purchases for the buffer stock.

Futures Market

Tin futures are traded on the LME.

United States Tin Stocks (Pig—Industrial) In Metric[1] Tons

Year	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1971	11,318	10,000	8,970	8,155	8,495	9,510	10,600	10,340	11,205	10,905	9,025	8,520
1972	9,804	12,005	12,670	11,247	10,630	12,535	11,240	11,235	12,195	10,080	11,370	12,180
1973[1]	11,757	10,435	9,023	9,764	9,419	8,286	9,175	9,038	10,795	9,300	9,002	9,495
1974	10,124	9,078	8,829	9,978	10,069	10,331	9,983	9,307	10,669	9,800	9,998	10,369
1975	10,420	11,873	13,117	10,333	10,986	11,240	11,049	9,164	9,133	9,249	9,883	8,840
1976	9,642	9,395	8,624	9,189	7,855	6,963	8,375	9,623	8,749	7,871	7,929	7,213
1977	7,282	8,032	7,883	5,874	6,157	5,644	4,720	6,305	5,557	5,378	9,124	7,272
1978	8,441	7,626	6,628	6,291	7,785	8,139	7,846	7,817	7,260	5,774	4,975	5,666
1979	5,040	4,594	4,254	5,891	6,097	5.938	6,317	6,270	6,096	5,058	4,901	4,244
1980	4,238	7,720	6,882	7,527	5,443	7,263	6,592	6,544	6,051	5,180	5,208	5,086
1981	5,504	5,968	5,745	5,229	5,745	5,978	6.227	6,465	5,663	5,710	5,325	5,563
1982	5,988											

[1] Data prior to 1973 are in LONG TONS. *Source: Bureau of Mines*

United States Tin (Pig) Consumption (Total) In Metric[1] Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1971	5,830	5,660	6,355	6,305	6,175	6,240	5,605	5,185	5,870	5,910	5,800	5,610	69,950
1972	5,370	5,470	6,190	5,750	6,150	5,985	5,260	5,660	5,405	5,700	5,365	5,525	69,201
1973[1]	5,964	6,040	6,472	6,411	6,569	6,330	5,294	5,720	5,913	6,355	6,045	5,878	75,838
1974	6,757	5,995	6,259	6,533	6,386	6,061	4,689	5,431	5,614	6,147	4,166	4,283	65,781
1975	3,871	4,847	4,841	5,055	4,394	4,308	3,810	4,298	4,521	4,755	4,410	4,618	55,800
1976	5,170	4,930	5,825	5,415	5,490	5,965	5,240	5,380	5,680	6,395	5,950	5,700	62,828
1977	5,600	5,500	6,800	5,800	5,800	6,000	5,200	5,800	5,900	5,400	5,000	5,100	68,000
1978	5,400	5,000	5,500	5,200	5,700	5,400	4,600	5,200	5,200	5,300	5,400	4,900	63,100
1979	5,400	5,500	6,400	5,400	5,400	5,300	4,900	4,900	5,000	5,500	5,000	4,600	62,465
1980	5,500	5,300	5,750	5,300	4,600	4,100	3,700	3,900	4,150	4,300	4,050	3,750	56,362
1981	4,300	4,400	4,100	4,600	4,400	4,350	3,900	4,200	3,950	3,900	3,400	2,950	48,450

[1] Data prior to 1973 are in LONG TONS. *Source: Bureau of Mines*

TIN

World Mine Production of Tin (Content of Ore) In Thousands of Metric[4] Tons

Year	Australia	Bolivia[1]	Brazil	U.S.S.R.	China[3]	Zaire (Congo)	Indonesia	Japan	Malaysia	Nigeria	Rwanda	South Africa	Thailand	United Kingdom	World Total
1969	8.6	29.6	2.6	.4	20.0	6.5	17.1	.7	72.2	8.6	1.3	1.8	20.8	1.6	225.7
1970	8.7	28.9	3.6	27.0	20.0	6.4	18.8	.8	72.6	7.8	1.3	2.0	21.4	1.7	228.5
1971	9.9	29.5	2.1	28.0	20.0	6.4	19.4	.8	74.3	7.2	1.3	2.0	21.3	1.8	231.4
1972	11.8	31.0	3.7	28.5	20.0	5.9	21.0	.9	75.6	6.6	1.3	2.1	21.7	3.3	240.3
1973[4]	10.8	30.3	5.4	29.0	20.0	5.4	22.3	.8	72.3	5.8	1.3	2.7	20.9	3.8	237.8
1974	10.5	29.5	4.4	29.5	20.0	4.7	25.0	.5	68.1	5.5	1.3	2.5	20.3	3.8	232.9
1975	9.6	24.3	5.0	30.0	22.0	4.6	25.3	.7	64.4	4.7	1.4	2.6	16.4	4.1	222.3
1976	10.6	30.3	5.4	31.0	11.0	3.8	23.4	.6	63.4	3.7	1.6	2.8	20.5	3.3	218.4
1977	10.6	33.7	6.5	33.0	13.0	5.1	25.9	.6	58.7	3.3	1.6	2.9	24.2	3.9	230.2
1978	11.9	30.9	7.0	34.0	14.0	4.4	27.4	.6	62.7	2.9	1.5	2.9	30.2	2.8	241.4
1979	12.6	27.6	7.7	35.0	14.0	3.9	29.5	.7	63.0	2.8	1.3	2.7	34.0	2.4	245.3
1980[2]	11.4	27.3	8.0	36.0	14.6	3.0	32.5	.5	61.4	2.5	1.2	2.8	33.7	3.0	246.3
1981[3]	12.0	25.0	9.0	37.0	14.6	3.0	32.0		62.0	2.0			35.0	2.5	248.0
1982															

[1] Exports. [2] Preliminary. [3] Estimate. [4] Data prior to 1973 are in LONG TONS. *Source: Bureau of Mines*

World Smelter Production of Tin In Thousands of Metric[3] Tons

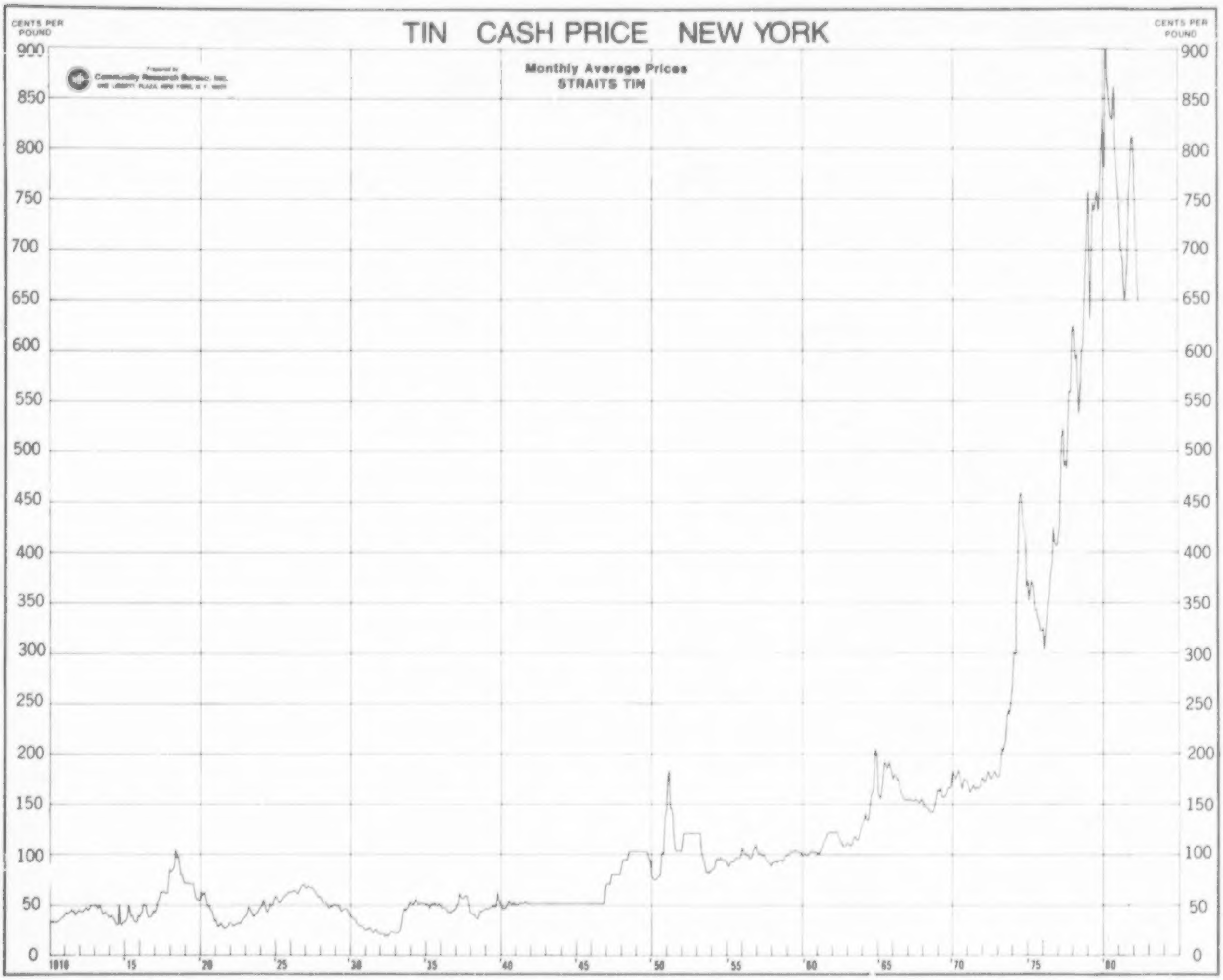
Year	United States[1]	Australia	Belgium	Bolivia	Brazil	Zaire (Congo)	Malaysia	China	W. Germany	Japan	Nigeria	Indonesia	Portugal	U.S.S.R.	Un. Kingdom	Total
1969	.3	4.2	4.4		2.2	1.9	87.1	20.0	1.4	1.4		5.9	.5	27.0	26.0	225.3
1970	N.A.	5.1	4.2		3.2	1.4	90.0	20.0	1.2	1.4	7.9	5.1	.4	27.0	21.7	223.7
1971	4.0	6.2	3.9		3.4	1.3	85.7	20.0	1.2	1.3	7.2	9.1	.5	28.0	22.8	232.0
1972	4.2	6.9	3.9		3.5	1.4	89.6	20.0	.8	1.3	6.6	11.8	.6	28.5	21.0	236.3
1973[3]	4.9	6.9	3.7		3.8	1.0	82.5	20.0	1.0	1.4	6.0	14.6	.5	29.0	20.4	233.9
1974	6.1	6.7	3.4	7.1	4.9	1.0	83.1	20.0	1.4	1.3	5.6	15.1	.5	29.5	20.4	236.2
1975	6.5	5.3	4.6	7.5	5.4	.6	83.1	22.0	1.3	1.2	4.7	17.8	.4	30.0	11.5	227.9
1976	5.7	5.6	4.1	9.8	6.4	.5	77.3	11.0	1.4	1.1	3.7	23.3	.3	31.0	11.2	224.1
1977	6.7	5.6	3.5	13.0	7.4	.8	66.3	13.0	2.9	1.3	3.3	24.0	.6	33.0	10.5	226.5
1978	5.9	5.1	3.3	16.3	9.3	.5	72.0	14.0	3.2	1.1	3.0	25.8	.5	34.0	8.4	241.9
1979	4.6	5.4	3.0	15.0	10.1	.5	73.1	14.0	2.5	1.3	2.9	27.8	.4	35.0	8.0	246.6
1980[2]	3.0	4.7	3.0	18.2	10.5	.3	72.0	14.6	2.4	1.3	2.0	29.1	.5	36.0	6.5	248.1
1981																

[1] Imports into the U.S. of tin concentrates (tin content). [2] Preliminary. [3] Data prior to 1973 are in LONG TONS.
Source: Bureau of Mines

Tin Foreign Trade of the United States In Metric[5] Tons

		Imports (For Consumption)														
		Concentrates[3] (Ore)			Bars, Blocks, Pigs, etc.[4] (Metal)											
Year	Exports (Metal[2])	Total All Ore	Bolivia	Indonesia	Total All Metal	Thailand	Belgium	Indonesia	Malaysia	Netherlands	Singapore	United Kingdom	Bolivia	Brazil	China (Mainland)	Nigeria
1969	2,903	0	—	—	54,950	13,946	31	—	37,945	267		1,873	—	—	—	170
1970	4,452	4,467	4,467	—	50,554	15,395	11	—	31,819	70		412	—	—	—	481
1971	2,262	3,060	3,010	—	46,940	13,861	16	—	27,746	25		621	864	—	—	306
1972	1,134	4,216	4,216	—	52,451	11,727	71	1,997	32,645	163		471	1,104	—	—	184
1973	3,406	4,798	4,782	—	45,845	7,964	118	2,829	28,255	45		888	832	—	—	105
1974	8,415	5,877	5,877	—	39,602	5,766	10	4,121	20,668	194		1,834	1,135	—	—	521
1975[5]	3,596	6,415	6,415	—	44,366	7,305	—	4,302	23,542	—	46	444	147	—	—	58
1976	2,338	5,733	5,733	—	45,055	6,885	—	4,972	26,981	—	15	284	1,978	—	—	—
1977	5,480	6,724	6,667	55	47,774	7,780	—	5,294	27,084	1	207	513	3,358	2,380	381	2
1978	4,692	3,873	3,541	165	46,776	6,865	155	5,664	23,928	50	230	468	5,768	1,810	1,571	—
1979	3,417	4,529	3,745	—	48,355	10,440	100	5,429	23,448	—	1,070	550	5,387	933	185	—
1980[1]	4,294	840	528	27	45,982	12,414	190	6,477	15,548	—	864	416	5,597	2,031	858	770
1981[6]	6,080	464	—	—	45,871	11,966	—	7,096	13,164	—	656	45	8,277	1,129	2,032	619
1982																

[1] Preliminary. [2] Pigs, bars, etc.; includes re-exports. [3] Tin content. [4] Also grain, or granulated. [5] Data prior to 1975 are in LONG TONS. [6] Estimate. *Source: Department of Commerce*



Average Price of Straits Tin (Alloyer Price[1]) in New York In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1969	162.50	165.18	155.52	156.81	156.67	159.00	162.00	165.91	165.64	166.71	175.96	181.32	164.43
1970	179.17	174.91	177.12	183.87	180.54	170.23	164.77	174.51	174.74	173.65	172.25	163.85	174.13
1971	161.64	162.85	167.01	168.88	166.02	164.48	166.44	166.07	167.29	167.70	175.39	174.36	167.34
1972	171.31	172.00	179.81	181.98	177.92	175.03	176.61	179.12	181.99	180.40	177.21	176.25	177.47
1973	179.05	192.00	205.09	202.44	209.11	212.27	237.55	243.45	239.50	245.91	262.44	300.99	227.48
1974	298.14	351.54	389.43	440.77	456.88	458.50	426.61	422.99	415.92	365.33	370.96	351.87	395.75
1975	363.76	372.03	366.04	354.10	342.54	342.48	333.32	331.85	322.77	321.95	324.03	303.02	339.83
1976[1]	312.39	326.00	349.07	358.80	377.00	390.30	424.27	411.27	405.40	406.77	414.84	423.25	383.34
1977	470.54	514.16	522.97	485.28	491.93	482.15	518.71	559.51	558.47	619.25	626.16	613.36	538.76
1978	591.19	595.93	557.48	537.85	570.58	600.95	606.21	641.80	679.66	739.69	758.84	695.86	631.34
1979	684.56	724.57	746.14	740.06	745.18	760.14	712.31	739.93	762.03	785.54	801.23	830.88	756.87
1980	836.46	866.39	900.23	872.21	861.84	845.19	836.95	834.61	861.92	832.92	788.67	751.36	840.73
1981	739.94	705.76	691.70	677.38	652.07	652.77	680.22	746.06	777.36	798.79	813.00	801.59	728.05
1982	787.41	749.93	669.51	649.58									
1983													

[1] Prices prior to 1976 are for PROMPT DELIVERY. *Source: American Metal Market*

U.S. Consumption of Primary and Secondary Tin In Metric[3] Tons

Year	Net Import Reliance as a % of Apparent Consumption	Industry Stocks Jan. 1	Net Receipts				Available Supply	Industry Stocks Dec. 31	Total Processed	Consumed in Mfg. Pdt's.
			Primary	Secondary	Scrap	Total				
1969		28,152	55,125	2,325	21,624	79,074	107,226	23,441	83,785	80,790
1970		23,441	52,096	2,502	19,748	74,346	97,787	21,505	76,622	73,837
1971[3]		21,505	52,557	2,531	16,439	71,527	93,032	18,855	74,177	71,073
1972		18,855	55,958	2,842	14,115	72,915	91,770	18,787	72,983	70,312
1973		18,787	60,125	4,089	13,915	78,129	96,916	18,534	78,382	75,838
1974		18,534	55,382	2,285	12,296	69,963	88,497	21,051	62,269	65,780
1975	84	21,051	42,430	2,699	10,568	55,697	76,748	19,510	57,238	55,800
1976	85	19,510	49,995	2,019	10,189	62,203	81,713	16,894	64,819	62,928
1977	82	16,894	48,215	4,025	10,604	62,844	79,738	16,858	62,880	60,732
1978	79	16,858	46,821	2,541	10,499	58,861	76,719	13,584	63,135	61,531
1979	80	13,584	44,914	2,636	7,430	54,980	68,564	4,497	64,067	62,465
1980[1]	79	4,497	46,968	2,461	7,821	57,250	61,747	4,550	57,197	56,362
1981[2]	80	4,550						4,055		
1982[2]		4,045								

[1] Preliminary. [2] Estimated. [3] Data prior to 1971 are in LONG TONS. *Source: Bureau of Mines*

Secondary Tin Recovered in the United States In Metric[4] Tons

Year	Tin Recovered at Detinning Plants						Tin Recovered by Form of Recovery								
	Tin-plate Scrap Treated (Ths. Tons)	Tin Recovered			Weight of Tin Compounds Produced	Avg. Quantity of Tin Recov. Per Ton of Tin-Scrap (Kilog.[5])									
		As Metal	In Compounds[2]	Total			Tin Metal	Bronze & Brass	Solder	Type Metal	Babbitt	Anti-Monial Lead	Chemical Compounds	Misc.[3]	Grand Total
1969	831.7	2,420	560	2,980	990	8.03	3,022	11,659	4,645	1,497	817	510	584	41	22,775
1970	771.4	1,988	620	2,608	1,076	7.57	2,574	9,277	4,898	1,517	683	351	700	1	20,001
1971	742.3	1,786	583	2,369	1,105	7.15	2,324	8,934	5,482	1,202	899	631	612	12	20,096
1972	715.0	1,494	672	2,166	1,284	6.79	2,199	9,354	5,213	1,232	854	604	716	8	20,180
1973	764.2	1,416	677	2,093	1,450	6.13	2,012	9,487	5,488	1,052	751	948	727	12	20,477
1974[4]	717.8	1,449	585	2,034	1,085	2.83	2,021	8,963	5,319	987	570	729	599	12	19,200
1975	651.2	1,146	670	1,816	1,344	2.79	1,741	7,144	4,414	877	569	442	670	12	15,869
1976	685.5	1,195	424	1,619	1,348	2.36	1,467	8,319	4,513	668	495	548	424	12	16,446
1977	667.4	1,376	365	1,741	1,516	2.61	1,668	10,397	4,094	708	694	565	365	12	18,503
1978	714.9	1,324	463	1,787	1,803	2.50	1,565	12,419	4,363	1,038	521	712	463	19	21,100
1979	841.4	1,536	433	1,969	1,256	2.34	1,767	12,090	5,282	584	441	867	433	29	21,493
1980[1]	766.9	1,457	321	1,778	1,533	2.32	1,703	10,402	4,423	525	378	856	321	30	18,638
1981[6]							1,545	7,745	2,805	360	245	530	—510—		13,740
1982															

[1] Preliminary. [2] Tin content. [3] Includes foil, cable lead & terne metal. [4] Data prior to 1974 are in LONG TONS. [5] Data prior to 1974 are in POUNDS. [6] Estimate. *Source: Bureau of Mines*

Consumption of Tin in the United States by Finished Products In Metric[5] Tons of Contained Tin

Year	Tin-plate[2]	Solder	Babbitt	Bronze & Brass	Collap. Tubes & Foil	Tinning	Chemicals[3]	Tin Powder	Type Metal	Bar Tin & Anodes	White Metal	Total	
												Primary	Secondary
1969	26,886	21,283	3,506	16,526	1,143	2,289	3,107	1,274	1,110	1,043	1,384	57,730	23,060
1970	25,127	20,184	3,241	13,666	860	2,143	3,125	1,059	1,109	1,052	1,274	52,957	20,880
1971	23,669	19,759	3,164	11,023	733	2,294	3,640	1,533	820	842	1,447	51,980	17,970
1972	21,070	21,961	3,135	9,722	806	2,540	4,030	1,150	840	896	1,717	53,501	15,700
1973	21,267	24,727	3,475	9,976	1,002	2,585	4,828	1,459	640	705	2,103	58,142	16,498
1974[5]	22,686	15,586	3,306	9,508	968	2,563	4,942	1,331	344	812	2,005	52,439	13,341
1975	18,869	15,075	2,605	7,555	538	1,896	3,998	850	265	637	2,217	43,620	12,180
1976	20,766	17,728	2,423	7,656	694	2,308	5,621	1,208	216	758	2,347	51,767	11,161
1977	18,539	17,315	2,093	8,606	787	2,323	5,727	1,287	202	578	1,655	47,596	13,136
1978	17,280	17,770	2,346	9,048	673	2,431	4,557	1,360	171	424	1,484	48,403	13,128
1979	17,929	18,022	2,243	8,690	686	2,584	4,797	1,435	140	567	1,258	49,496	12,969
1980[1]	16,346	15,618	2,380	7,478	526	2,577	N.A.	1,109	N.A.	486	914	44,342	12,020
1981[4]	13,027	12,411	1,189	5,834	421	1,158		994		397	478	37,350	11,100
1982													

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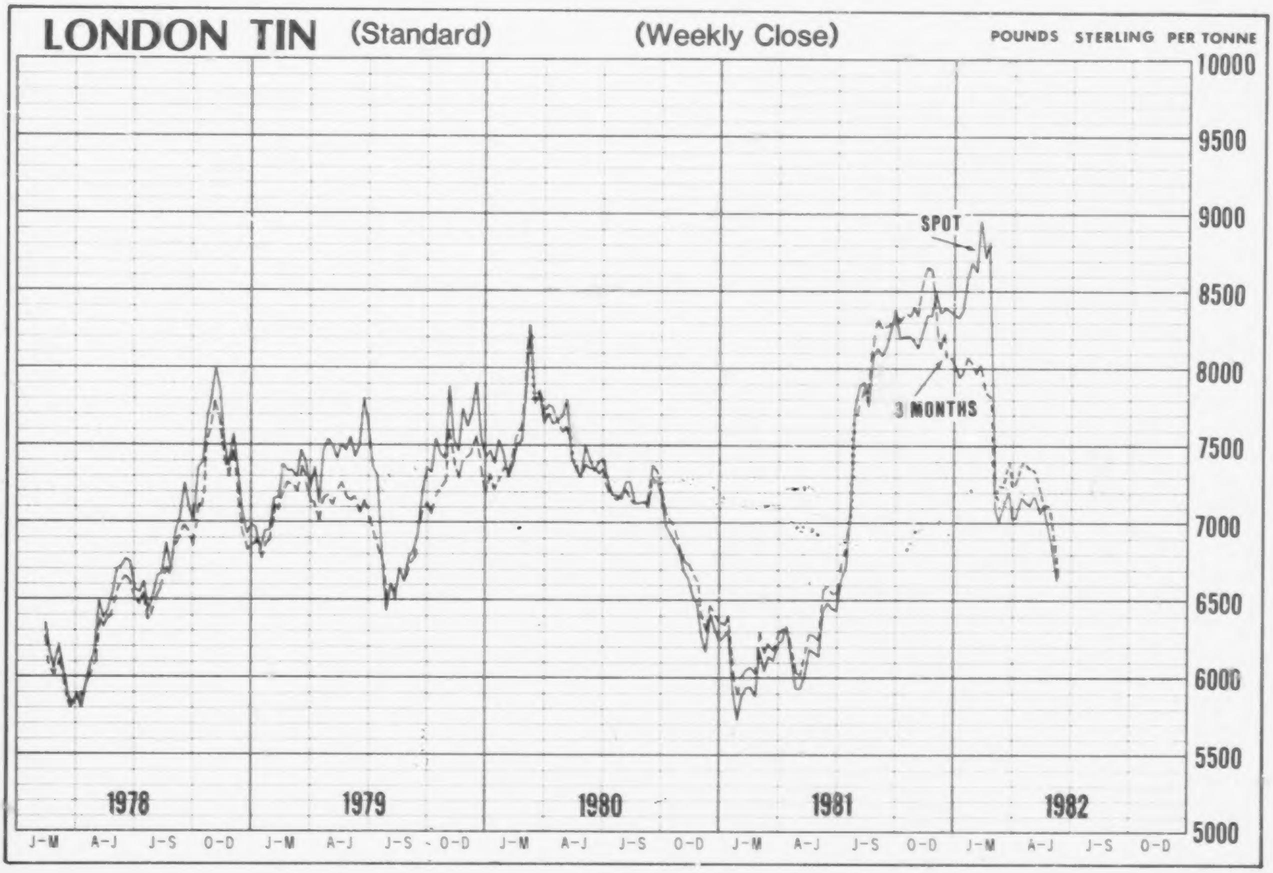
[1] Preliminary. [2] Includes small quantity of secondary pig tin and tin acquired in chemicals. [3] Including tin oxide. [4] Estimated. [5] Data prior to 1974 are in LONG TONS. *Source: Bureau of Mines*

LONDON TIN (Standard) (Weekly Close)



Titanium

The source of titanium for sponge production is rutile, and ilmenite is the source for pigment production. Titanium metal is currently produced in the U.S. from imported rutile or synthetic rutile. Nearly all U.S. ilmenite production is used to make titanium dioxide pigments.

Ilmenite mine production in the U.S. was about the same in 1981 as in 1980, but production capacity was expected to be reduced by 24 percent with the scheduled closing of the Manchester ilmenite mine near Lakehurst, N.J. In 1981, domestic production of titanium dioxide pigments was 6 percent larger than in 1980, imports of titanium dioxide pigments for consumption were up 28 percent, apparent consumption was up 8.4 percent, and stocks at the end of 1981 were 21 percent higher than at the end of 1980. The U.S. Bureau of Mines anticipated a 9 percent reduction in U.S. production of ilmenite in 1982 and also a slight decrease in apparent consumption.

Production of natural rutile in Australia, which accounts for about 65 to 70 percent of world supply, was about 15 percent lower in 1981 than in 1980. U.S. imports of natural and synthetic rutile from Australia in 1981 were only about 57 percent as large as those in the preceding year. The need for rutile imports decreased partly because of the increased production from a synthetic rutile plant in Alabama. The U.S. Bureau of Mines anticipated an increase in reported U.S. consumption of rutile in 1982. From a 1978 base year, demand for rutile (natural and synthetic) was expected to increase at an annual rate of about 3 percent through 1990. U.S. production of titanium sponge increased about 9 percent in 1981 from the 1980 level. Imports of sponge rose almost 36 percent during 1981, mostly from Japan. Consumption of sponge was up only about 17 percent in 1981, and December 31, 1981 stocks held by industry rose 56 percent. Imports of scrap were off about 8 percent in 1981, but consumption of scrap was also down about 4 percent from the 1980 level, and yearend stocks rose 21 percent. U.S. imports of titanium metal mill products in 1981 were 18 percent larger than in 1980, but mill product consumption (net shipments) was off 11 percent in 1981.

Demand for titanium declined in the fourth quarter of 1981, primarily because of a reduction in the rate of construction of commercial aircraft. The U.S. supply of titanium on the next few years, augmented by industry expansion, including new domestic sponge plants and imports from expanded Japanese facilities, was generally considered to be ample for anticipated demand, including the B-1 bomber program.

As of November 30, 1981 the U.S. government stockpile goal for titanium sponge remained at 195,000 short tons vs. inventory of 32,331 tons.

World Production of Titanium Sponge Metal & U.S. Consumption of Titanium Concentrates In Short Tons

	Production of Titanium Sponge Metal[1]				U.S. Consumption of Titanium Concentrates, by Products										
					Ilmenite (TiO_2 Content)					Rutile (TiO_2 Content)					
Year	Central Economy Countries	Other Mkt. Econ. Count.	Japan	United States	Pigments (Mfg. TiO_2)	Welding Rod Coatings	Alloys & Carbide	Misc.	Total	Ceramics	Welding Rod Coatings	Alloys & Carbine	Pigments	Misc.	Total
1972		2,500	5,133	12,000	453,248	N.A.	N.A.	8,174	461,422	N.A.	10,392	N.A.	199,894	21,945	232,231
1973		2,500	6,100	17,000	470,087	N.A.	N.A.	9,144	479,231	N.A.	10,059	N.A.	221,658	31,648	263,365
1974		2,500	9,825	20,000	492,206	N.A.	N.A.	9,070	501,276	N.A.	11,181	N.A.	228,507	38,032	277,720
1975		2,500	8,358	18,000	424,302	—	—	8,107	432,409	—	9,782	—	181,128	28,013	218,923
1976		2,100	6,995	14,000	490,845	—	—	7,168	498,013	—	7,736	—	194,950	20,926	223,612
1977	39,000	2,400	7,049	N.A.	514,429	—	—	6,765	521,194	—	8,184	—	136,191	29,465	173,840
1978	39,000	2,400	10,115	N.A.	467,410	N.A.	N.A.	8,038	475,448	—	8,427	N.A.	195,431	41,326	245,184
1979	43,000	2,600	14,000	N.A.	475,342	N.A.	N.A.	11,886	478,228	—	9,947	N.A.	230,776	52,189	292,912
1980[3]	45,000	2,600	21,257	N.A.	504,338	N.A.	N.A.	11,155	515,493	—	6,876	N.A.	178,705	59,407	244,988
1981[2]	47,000	2,600	28,000	N.A.											

[1] Unconsolidated metal in various forms. [2] Estimated. [3] Preliminary. *Source: Bureau of Mines*

Average Prices in the United States

Year	Titanium Ilmenite—54% TiO_2 F.O.B. Atlantic Seaboard—$ per Long Ton	Titanium Rutile F.O.B. Atlantic & Great Lakes Ports. Last Quarter (Soot) $ per Short Ton	Titanium Metal Sponge. Yearend $ per Pound	Titanium Dioxide Pigments ($ per Lb.) Anatase	Titanium Dioxide Rutile, Yearend $ per Pound
1972	23	175	1.32		
1973	27	310	1.42		
1974	47	710	2.25		
1975	55	710	2.70	0.385	0.435
1976	55	510	2.70	0.410	0.465
1977	55	360	2.98	0.435	0.485
1978	50	340	3.28	0.460	0.510
1979	50	390	3.98	0.530	0.590
1980	55	440	7.02	0.570	0.630
1981[1]	70	460	7.65	0.690	0.750

[1] Preliminary. *Source: U.S. Bureau of Mines*

World Production of Titanium Rutile Concentrates In Short Tons

Year	South Africa	Australia	USSR	Egypt	Brazil	Sierra Leone	India	Sri Lanka (Ceylon)	United States	World Total
1969	543	399,100	—	—	10	31,379	2,751	3,036	N.A.	436,819
1970	—	405,156	—	—	258	48,593	2,400	3,100	N.A.	459,507
1971	—	404,233	—	—	129	13,153	3,210	3,100	N.A.	423,825
1972	—	345,176	—	—	454	—	3,379	2,371	N.A.	351,380
1973	—	358,914	—	—	46	—	3,748	2,482	9,255	374,445
1974	—	351,308	30,000	—	161	—	6,400	3,450	6,446	397,765
1975	—	383,990	30,000	—	115	—	4,000	3,427	11,000	421,532
1976	—	429,625	10,000	—	56	—	4,000	1,145	N.A.	444,826
1977	5,000	358,561	10,000	—	141	—	6,053	1,078	N.A.	380,833
1978	19,951	283,376	10,000	—	402	—	6,329	12,673	N.A.	332,731
1979	46,010	307,435	10,000	—	484	11,000	5,396	16,176	N.A.	396,501
1980[1]	53,000	323,801	10,000	—	500	55,000	7,700	16,500	N.A.	466,501
1981[2]	53,000	275,000			500	68,000	8,000	16,000	N.A.	430,000
1982										

[1] Preliminary. [2] Estimate. *Source: Bureau of Mines*

World Production of Titanium Ilmenite Concentrates[2] In Thousands of Short Tons

Year	Australia (Shipments)	Canada[2]	Sri Lanka (Ceylon)	Finland	India	Japan[3]	Malaysia (Exports)	Norway	Brazil	USSR	Spain	South Africa	United States[4]	World Total[2]
1969	794.2	749.2	91.3	152.3	56.7	10.1[5]	146.2	540.9	22.4	—	32.2	18.2	931.2	3,546
1970	988.8	844.7	93.2	166.4	86.0	12.2[5]	212.1	638.2	22.8	—	29.9	—	868.0	3,963
1971	914.1	853.0	102.4	153.8	72.8	8.7[5]	171.9	707.2	10.9	—	26.0	—	683.1	3,705
1972	791.6	920.4	90.9	164.8	100.4	6.0[5]	170.1	670.7	4.2	—	24.8	—	681.7	3,626
1973	792.7	942.7	103.0	175.3	85.1	7.1[5]	204.3	829.9	4.6	—	4.1	—	776.0	3,925
1974	916.6	931.2	93.9	167.6	146.0	4.9	169.2	934.9	7.4	338.0	—	—	744.6	3,519
1975	1,111	826.6	70.6	135.1	90.0	4.9	123.7	580.5	5.1	360.0	—	—	717.3	4,026
1976	1,071	897.4	61.5	135.1	90.0	3.8	198.4	845.1	16.1	420.0	—	—	652.4	4,391
1977	1,151	763.2	37.6	137.5	151.4	1.4	169.4	913.3	14.6	440.0	—	—	638.5	4,418
1978	1,401	937.0	36.4	145.4	178.1	.2	205.9	845.5	22.1	450.0	100.0	100	598.8	4,912
1979	1,292	525.8	61.0	131.9	158.7	.2	220.3	903.6	14.5	450.0	330.0	316	639.3	4,714
1980[1]	1,473	964.2	64.0	165.0	198.0	—	176.0	912.5	22.0	460.0		479	548.9	5,363
1981[6]	1,350	960.0		160.0	200.0		170.0	910.0				420	550.0	5,260
1982														

[1] Preliminary. [2] Includes Ti slag containing approx. 70% TiO_2 [3] Represents titanium slag. [4] Includes a mixed product containing ilmenite, leucoxene, & rutile. [5] Includes slag & concentrate. [6] Estimate. *Source: Bureau of Mines*

Salient Statistics of Titanium[4] in the United States In Short Tons

	Ilmenite				Titanium Slag			Rutile		Exports of Titanium Products			
Year	Production (Gross Wt.)	Shipments (TiO_2)	Imports[3]	Stocks Dec. 31 (TiO_2)	Consumption (TiO_2)	Imports[3]	Stocks (TiO_2)	Imports[3]	Stocks Dec. 31 (TiO_2)	Ores & Concentrates	Scrap	Dioxide & Pigments	Ingots, Billets, Etc.
1969	931,247	480,918	28,524	475,960	98,075	82,329	73,308	204,898	187,183	1,424	2,802	24,507	1,773
1970	867,955	487,298	96,123	458,046	91,639	134,996	81,761	243,259	227,689	1,058	2,902	26,194	1,740
1971	683,075	388,802	28,093	383,113	101,751	152,661	76,741	227,784	225,925	1,760	1,711	26,759	430
1972	677,944	417,553	14,836	314,584	187,608	298,259	100,746	220,533	150,801	1,802	3,510	10,335	562
1973	776,013	458,541	69,691	329,477	199,287	237,248	78,650	226,860	139,641	1,494	4,142	20,769	745
1974	744,571	434,605	82,448	325,918	182,257	236,272	40,836	246,489	101,394	3,264	4,730	30,379	1,719
1975	717,281	404,269	122,010	378,181	104,585	212,682	62,130	224,499	131,742	3,147	4,326	15,807	1,900
1976	652,404	374,989	168,402	429,801	144,506	171,624	70,242	281,712	143,243	4,802	6,144	20,580	1,065
1977	638,503	331,139	334,990	494,658	106,201	150,564	44,464	123,800	136,935	22,679	3,394	16,336	1,050
1978	589,751	352,842	308,671	510,430	91,490	149,172	75,097	289,617	172,685	N.A.	5,453	39,341	1,340
1979	639,292	389,535	184,478	462,415	106,346	111,210	56,917	283,479	119,947	9,903	4,967	51,456	1,984
1980[1]	548,882	358,181	357,488	559,779	133,993	194,994	127,981	281,605	138,192	17,830	3,300	45,795	3,278
1981[2]	550,000		236,217			243,072		228,127					
1982													

[1] Preliminary. [2] Estimate. [3] For consumption. [4] Natural & synthetic. *Source: Bureau of Mines*

Tobacco

The 1981 U.S. tobacco crop totaled 2.05 billion pounds, compared with 1.78 billion in the previous year. Increases in both acreage and yield resulted in the larger crop. With improved growing conditions, producers turned out the largest burley output since 1963 and the highest yielding flue-cured crop since 1964. Less acreage was expected for 1982 because of lower effective quotas for flue-cured and burley.

The larger 1981 crop and carryin stocks raised the 1981/82 season's domestic leaf supply to 5.32 billion pounds, 5 percent above the previous year. On January 1, 1982 nonfarm stocks were 3 percent above a year earlier.

Domestic Use

Cigarettes: Cigarette output in 1981, a record 736 billion cigarettes, increased 3 percent above 1980. Both domestic use and exports gained. Also, consumption of smokeless tobacco products (chewing tobacco and snuff) gained again in 1981. Use of both smoking tobacco and cigars were slightly below a year earlier; only modest changes were expected in 1982.

U.S. smokers consumed 640 billion cigarettes in 1981, 1 percent above 1980. Consumption per adult at 192 packs was about the same as in 1980. Total cigarette use could remain steady in 1982, if increasing population offset reduced per capita use.

Cigar use: Large cigar use (including cigarillos) continued to decline in 1981. U.S. smokers used about 3.9 billion large cigars in 1981, 3 percent fewer than a year earlier. Production of small cigars—less than 3 pounds per 1,000—declined to 1.40 billion pieces, off 3 percent from 1980, and continued the downward trend that started in 1973.

Smokeless use: In 1981, the use of snuff gained enough to more than offset a decline in chewing tobacco. Manufacturers sell virtually all their chewing tobacco and snuff domestically.

Foreign Trade

The United States is the world's leading tobacco exporter and the largest importer. U.S. exports of tobacco and products were valued at a record $2.72 billion in 1981, 12 above 1980. U.S. tobacco imports increased 14 percent to $487 million, still leaving a record trade balance of $2.2 billion.

U.S. exports of unmanufactured tobacco in 1981 declined 2 percent from 1980 to 584 million pounds (265,000 tonnes) in export (dried) weight. The farm-sales weight was 702 million pounds, 19 million below 1980.

Exports of Maryland and Kentucky-Tennessee fire-cured gained: flue-cured, burley, and other categories were below 1980. Total exports remained below the high level reached in 1978.

European markets, which typically take more than half of U.S. leaf tobacco exports, decreased U.S. imports by 11 percent in 1981. Asian countries took larger amounts. Several countries experienced a slowdown in the growth of cigarette sales in 1981. High U.S. prices contributed to a shift to non-U.S. tobaccos. Also, high interest rates limited manufacturers' ability to carry stocks.

However, the larger 1981 U.S. crop resulted in a wider selection of prices and qualities and 1982 U.S. exports were expected to be 10 percent above 1981.

Japan replaced West Germany as the leading destination for U.S. tobacco in 1981. U.S. exports to both countries were expected to gain in 1982. The United Kingdom, long a major U.S. market, recovered to third place in 1981 ahead of Spain.

Exports of flue-cured tobacco in 1981 slipped 1 percent, but again represented over three-fourths of the value of total U.S. tobacco shipments. Asian countries took 23 percent more than a year ago, about offsetting smaller purchases by European destinations.

Burley exports in 1981 fell 18 percent. There were smaller purchases by virtually all destinations due to the short U.S. supplies. Maryland and fire-cured tobacco exports were both greater than in the previous two years.

U.S. Government Programs

The 1982 price support program for tobacco was similar to programs in previous years. Price support is available to eligible growers through nonrecourse loans to producer associations. The USDA continued the four-leaf program which permits participating producers to exceed their allotments if they discard in the field the four bottom leaves of each plant. The Agricultural and Food Act of 1981 requires USDA to operate the price support and loan program at no net cost to taxpayers.

Support prices for the 1982 crop were increased 10.8 percent from 1981. The formula in the law takes account for the higher prices for goods and services bought by farmers during the past 3 calendar years (1979–81), as compared with 1959 average prices paid. To receive price supports, tobacco producers must certify that they did not use DDT, TDE, toxaphene, or endrin insecticides.

Farm quotas for 1982 are down 12 percent for flue-cured tobacco and 6 percent for burley. Because of quota changes U.S. tobacco growers intended to reduce 1982 plantings 6 percent from the 966,000 acres harvested in 1981.

Growers of fire-cured and dark air-cured tobaccos approved marketing quotas, so price support will be available for their 1982, 1983, and 1984 crops. Growers of flue-cured, burley, sun-cured, cigar binder, and Ohio filler tobaccos previously approved marketing quotas applicable to the 1982 crop. Maryland and Pennsylvania filler tobacco will not have supports because marketing quotas were previously rejected by growers.

World Production of Leaf Tobacco In Thousands of Metric Tons[5] (Farm Sales–Weight[3])

Year	United States	Brazil	Canada	China	U.S.S.R.	France	Greece	India	Indonesia	Italy	Japan	Pakistan[4]	Philippines	Turkey	World Total[1]
1969	1,810	415	247		516	100	170	796	287	173	383	364	201	317	9,821
1970	1,911	432	222	1,700	569	106	200	743	240	173	332	360	218	330	10,021
1971	1,712	432	225	1,781	604	96	184	798	173	166	328	336	155	383	9,865
1972	1,754	421	187	1,852	516	109	188	924	165	176	318	192	107	401	10,155
1973	1,744	399	257	2,103	672	112	202	821	287	207	347	139	168	334	10,670
1974[5]	906.1	225.5	116.5	983.8	313.0	51.7	81.1	462.1	78.3	92.7	151.3	64.6	88.4	203.5	5,185
1975	994.0	285.6	106.1	959.8	298.0	56.3	118.2	394.8	82.2	113.4	165.7	78.0	66.3	208.6	5,369
1976	971.0	276.1	81.5	1,370	318.0	61.4	140.0	349.8	88.4	108.6	176.2	60.7	89.0	324.0	6,038
1977	870.0	310.0	104.3	1,389	307.0	43.6	118.9	418.8	83.7	109.7	173.2	72.6	84.3	248.0	5,892
1978	919.8	330.0	115.6	1,452	282.0	50.5	130.3	493.6	82.5	109.7	172.0	76.3	79.2	292.6	6,097
1979	693.3	401.0	78.9	1,206	301.0	50.6	127.2	453.8	141.2	136.6	153.3	69.9	85.3	214.3	5,701
1980[2]	809.7	350.0	107.9	1,148	289.0	46.5	116.8	446.9	136.8	125.5	141.4	71.0	75.5	250.0	5,575
1981[1]	919.3	315.0	110.0	1,400	295.0	44.4	122.4	450.0	124.5	123.4	142.7	61.2	81.3	200.0	5,823
1982															

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[1] Estimated. [2] Preliminary. [3] Farm–Sales–weight is about 10% above dry weight which is normally reported in trade statistics. [4] Bangladesh (Formerly East Pakistan) excluded from 1972 to date. [5] Data prior to 1974 are in MILLIONS OF POUNDS. *Source: Foreign Agricultural Service, U.S.D.A.*

Production and Consumption of Tobacco Products in the United States

Year	Production									Consumption[3] Per Capita[4]					
	Chewing Tobacco														
	Plug	Twist	Fine-cut	Loose-leaf	Total	Cigarettes	Cigars[2]	Smoking Tobacco	Snuff	Cigars[2]	Cigarettes	Cigars[2]	Cigarettes	Smoking Tobacco	Total Pdt.'s
	Million Pounds					Billion		Million Lbs.		Number		Pounds			
1969	23.3	2.5	4.5	39.5	69.8	557.6	6.93	63.9	27.6	125.0	3,993	2.11	8.11	1.08	10.04
1970	22.0	2.4	4.8	39.5	68.7	583.2	7.09	69.4	26.5	125.3	3,985	2.08	7.77	1.15	9.68
1971	20.6	2.4	5.1	43.2	71.4	576.4	6.71	60.5	26.4	119.2	4,037	1.94	7.75	1.06	9.52
1972	19.6	2.2	5.2	45.6	72.6	599.1	6.03	55.9	25.5	108.9	4,043	1.74	7.95	1.00	9.65
1973	18.6	2.2	5.7	47.6	74.0	644.2	5.66	53.0	25.3	102.4	4,148	1.61	7.92	.88	9.53
1974	18.0	2.2	6.2	52.9	79.2	635.0	5.28	49.0	25.0	91.9	4,141	1.47	7.90	.87	9.40
1975	18.1	2.3	7.3	53.7	81.5	651.2	4.52	46.2	24.4	82.4	4,123	1.32	7.73	.76	9.14
1976	16.7	2.3	8.4	56.3	83.7	693.4	4.18	44.6	24.8	75.0	4,092	1.20	7.35	.75	8.69
1977	16.4	2.2	10.1	61.3	90.0	665.9	3.93	40.7	24.6	67.9	4,051	1.13	7.21	.65	8.49
1978	15.9	2.1	12.0	64.6	94.6	695.9	3.80	36.4	25.1	63.4	3,967	1.05	6.89	.60	8.10
1979	15.3	2.0	13.3	71.7	102.3	704.4	3.60	32.8	23.7	55.0	3,850	.90	6.97	.50	8.12
1980	17.3	1.9	14.7	72.1	106.0	714.1	3.45	32.2	24.3	50.4	3,845	.83	6.87	.47	7.98
1981[1]	17.4	1.8	15.2	71.9	106.3	734.7	3.43	30.3	26.0	48.4	3,840	.80	6.91	.45	8.00
1982															

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[1] Preliminary. [2] Large cigars & cigarillos. [3] Consumption of tax-paid tobacco products; Represents unstemmed equivalent of tobacco used in the manufacture of these products. [4] 18 years old & over.
Sources: Bureau of the Census; Internal Revenue Service

Production of Tobacco in the United States In Millions of Pounds

Year	Conn.	Florida	Georgia	Indiana	Kentucky	Maryland	Massachusetts	North Car.	Ohio	Pa.	South Car.	Tenn.	Virginia	Wisconsin	W. Virg.
1969	7.3	26.0	97.9	14.8	436.8	28.0	3.2	716.0	21.9	37.5	136.7	120.8	134.6	13.2	3.6
1970	8.7	28.9	133.3	14.6	411.9	29.4	3.6	815.5	20.8	30.1	141.1	114.3	125.8	18.4	3.3
1971	7.6	25.6	115.1	12.1	356.3	28.1	2.9	727.1	17.5	24.5	133.2	105.6	118.4	22.5	2.0
1972	5.6	23.5	115.2	15.5	446.7	23.8	1.9	680.4	22.5	18.2	131.1	124.7	112.1	18.7	3.3
1973	6.8	24.0	97.9	10.6	320.9	31.5	2.0	811.9	15.9	22.1	132.7	101.3	138.1	19.0	2.8
1974	7.9	27.8	161.4	16.7	452.0	30.2	2.4	789.2	23.1	26.0	172.0	110.9	141.6	18.5	2.9
1975	6.4	29.6	151.0	17.0	456.7	21.9	2.0	957.0	23.7	19.8	189.0	134.6	142.1	20.8	3.1
1976	7.2	30.8	123.8	18.2	497.4	29.9	1.8	902.9	23.3	23.6	153.4	139.7	153.9	20.2	3.2
1977	5.6	24.8	134.9	16.6	452.0	30.1	1.9	744.5	22.7	26.2	138.7	136.7	143.0	24.4	3.2
1978	5.0	22.1	125.7	15.5	469.7	30.6	1.5	849.7	22.5	25.2	150.5	142.1	135.2	20.3	2.7
1979	4.9	23.2	101.0	11.9	343.1	22.0	1.5	621.4	14.1	17.7	117.7	104.8	109.6	25.1	1.7
1980	5.3	20.4	110.6	16.8	420.7	25.3	1.9	762.4	20.0	24.7	125.5	111.9	106.9	26.0	1.8
1981[1]	5.2	22.8	121.0	16.3	510.2	29.9	1.8	793.3	21.8	25.2	149.6	161.1	155.1	26.1	2.3
1982															

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[1] Preliminary, December estimate. *Source: Crop Reporting Board, U.S.D.A.*

TOBACCO

U.S. Salient Statistics for Flue-Cured Tobacco (Types 11–14)

Crop Year	Acres Harvested 1,000	Yield Per Acre 100 Lbs.	Production	Stocks, July 1	Total Supply	Exports	Dom. Disappearance	Total Disappearance	Farm Price ¢ Lb.	Crop Value Mil. $	Parity Price[2]	Price Support Level	Placed Under Gov't Loan	Under Loan July 1
			Millions of Pounds								¢ Lb.		Mil. Lb.	
1969	576.8	18.3	1,053	2,100	3,153	535	646	1,181	72.4	762	92.6	63.8	97.6	800.5
1970	584.1	20.4	1,178	1,972	3,151	534	640	1,174	72.0	848	96.3	66.6	144.2	744.9
1971	525.8	20.5	1,076	1,976	3,053	480	663	1,143	77.2	832	101.0	69.4	55.7	761.9
1972	513.6	19.7	1,022	1,910	2,932	519	664	1,183	85.3	864	106.0	72.7	24.3	617.8
1973	575.1	20.1	1,159	1,749	2,908	598	703	1,301	88.1	1,019	123.0	76.6	30.7	402.3
1974	617.3	20.1	1,245	1,607	2,852	548	652	1,201	105.0	1,307	136.0	83.3	23.0	276.7
1975	717.2	19.7	1,415	1,652	3,067	523	671	1,193	99.8	1,442	150.0	93.2	259.0	179.9
1976–7	666.6	19.7	1,316	1,898	3,214	514	634	1,148	110.4	1,453	155.0	106.0	277.3	359.2
1977–8	589.3	19.2	1,124	2,075	3,199	539	608	1,147	117.6	1,329	162.0	113.8	195.6	556.9
1978–9	602.1	20.5	1,206	2,052	3,258	599	584	1,183	135.0	1,663	176.0	121.0	64.1	534.0
1979–0	502.8	18.8	946	2,075	3,021	520	563	1,083	140.0	1,324	203.0	129.3	72.0	564.0
1980–1	551.8	19.6	1,086	1,965	3,052	490	549	1,039	144.5	1,569	222.0	141.5	137.2	554.4
1981–2[1]	539.8	21.6	1,144	2,013	3,157	550	550	1,100	166.4	1,904		158.7	106.4	595.8
1982–3[3]	494.5	20.0	989	2,057	3,046									550.0

[1] Preliminary. [2] As of applicable date when support level was computed. [3] Estimate. *Source: Agricultural Marketing Service, U.S.D.A.*

U.S. Salient Statistics for Burley Tobacco (Type 31)

Crop Year	Acres Harvested 1,000	Yield Per Acre 100 Lbs.	Production	Stocks, Oct. 1	Total Supply	Exports	Dom. Disappearance	Total Disappearance	Farm Price ¢ Lb.	Crop Value Mil. $	Parity Price[2]	Support Level	Placed Under Gov't. Loan	Under Loan on Oct. 1
			Millions of Pounds								¢ Lb.		Mil. Lb.	
1969	237.7	24.9	591	1,317	1,908	58	507	565	69.6	411	96.5	65.8	158.2	340.8
1970	216.4	25.9	561	1,343	1,903	54	503	557	72.2	405	101.0	68.6	47.7	454.8
1971	213.5	22.1	473	1,346	1,818	55	515	570	80.9	382	104.5	71.5	.2	468.4
1972	235.6	25.5	590	1,249	1,839	75	535	610	79.2	476	111.0	74.9	22.9	327.6
1973	222.1	20.3	461	1,229	1,691	87	533	619	92.9	418	129.0	78.9	.7	276.7
1974	260.7	23.5	610	1,071	1,681	68	519	587	113.7	694	147.0	85.8	2.8	139.2
1975	282.2	22.7	638	1,094	1,733	92	510	603	105.5	673	158.0	96.1	50.7	12.0
1976–7	285.8	23.8	664	1,160	1,824	117	490	606	114.2	775	160.0	109.3	46.6	44.8
1977–8	268.6	23.0	613	1,217	1,830	117	495	611	120.0	741	166.0	117.3	57.0	54.9
1978–9	261.4	24.0	618	1,218	1,836	121	503	624	131.2	822	184.0	124.7	67.7	113.5
1979–0	238.1	18.7	446	1,212	1,658	133	499	632	145.2	700	210.0	133.3	7.3	155.4
1980–1	276.6	20.3	558	1,026	1,583	106	478	583	165.9	926	236.0	145.9	.0	66.3
1981–2[1]	323.7	22.1	717	1,000	1,717	140	490	630	180.7	1,296		163.6	.8	0
1982–3[3]	320.5	22.0	705	1,087	1,792									.5

[1] Preliminary. [2] As of applicable date when support level was computed. [3] Estimate. *Source: Agricultural Marketing Service, U.S.D.A.*

Exports[1] of Tobacco from the United States In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1969	8.1	4.2	42.4	39.6	66.5	55.5	43.5	43.1	61.7	62.3	74.7	77.3	579.1
1970	20.5	28.2	41.1	38.3	39.9	42.3	34.7	29.6	46.8	53.7	72.8	62.5	510.3
1971	39.3	32.3	52.4	44.5	47.4	39.8	35.4	41.8	76.8	3.5	2.4	59.6	474.2
1972	95.4	87.0	28.6	17.9	42.7	33.3	39.2	40.5	48.3	54.1	63.1	56.2	606.2
1973	43.1	45.3	45.6	43.6	46.2	45.3	40.1	40.6	54.6	70.2	81.9	56.6	613.0
1974	53.5	47.6	39.1	52.7	57.7	62.8	45.2	47.6	40.0	64.1	73.0	68.3	651.4
1975	57.1	33.5	52.5	46.7	44.2	32.1	23.2	39.5	44.9	52.7	73.9	62.9	563.0
1976	93.2	52.0	47.1	43.5	29.7	26.0	23.9	34.7	48.2	52.9	51.3	75.6	578.0
1977	76.8	53.0	54.7	31.3	38.0	41.5	49.7	47.5	66.3	17.9	49.5	102.4	628.6
1978	52.5	55.6	73.2	40.9	32.3	29.2	42.7	52.3	41.3	85.8	95.8	86.3	687.8
1979[2]	35.6	50.1	57.1	51.8	42.2	25.3	38.0	29.5	30.1	41.6	78.9	81.5	561.8
1980[2]	28.0	52.5	80.1	54.6	53.2	43.0	40.9	25.8	32.3	47.6	64.4	66.6	591.5
1981[2]	44.8	32.8	53.7	49.4	44.6	40.1	31.3	27.4	45.5	63.2	86.8	55.6	575.3
1982[2]	31.7												

[1] Represents unmanufactured tobacco, including stems, trimmings and scrap. [2] Preliminary. *Source: Department of Commerce*

Salient Statistics of Tobacco in the United States

Year	Acres Harvested 1,000 Acres	Yield Per Acre Lbs.	Production Million Lbs.	Farm Price ¢ Lb.	Farm Value Mil. $	Tobacco (July–June)		U.S. Exports of				Stocks of Leaf Tobacco[4] All Types			
						Exports[2]	Imports[3]	Cigarettes	Cigars & Cheroots	Chewing Tobacco & Snuff	Smoking Tobacco[7]	Jan. 1	April 1	July 1	Oct. 1
						Mil. Lbs.		Millions		Metric Tons[6]		Billion Pounds			
1969	918	1,964	1,803	71.8	1,296	571.0	210.1	24,969	65	33	21,246	5,179	5,005	4,590	4,771
1970	898	2,122	1,906	72.9	1,389	554.7	223.9	29,163	54	64	25,022	4,940	4,822	4,439	4,650
1971	838	2,035	1,705	78.6	1,340	524.2	259.1	31,812	53	39	32,086	5,006	4,763	4,371	4,474
1972	842	2,076	1,749	83.0	1,451	569.1	250.3	34,602	75	42	30,425	4,828	4,531	4,186	4,405
1973	887	1,965	1,742	90.1	1,569	657.4	294.2	41,543	107	93	27,084	4,700	4,459	4,039	4,196
1974	963	2,067	1,990	108.6	2,160	604.0	322.4	46,901	86	121	39,848	4,409	4,215	3,762	4,123
1975	1,087	2,008	2,182	102.6	2,238	588.2	313.3	49,935	92	32	8,703	4,457	4,310	3,946	4,282
1976	1,047	2,041	2,137	112.5	2,404	581.8	293.7	61,370	124	34	6,680	4,738	4,568	4,166	4,608
1977	966	1,982	1,914	118.6	2,270	617.0	335.7	66,845	107	43	4,844	4,798	4,797	4,431	4,710
1978	964	2,101	2,025	132.4	2,680	671.9	359.7	74,359	166	47	1,578	5,008	4,781	4,451	4,728
1979	827	1,845	1,527	141.1	2,154	617.4	398.1	79,717	177	43	10,634	5,071	4,914	4,518	4,740
1980[1]	920.5	1,940	1,786	152.3	2,709	553.4	439.8	82,000	200	124	3,250	4,974	4,608	4,284	4,548
1981[1]	966.0	2,120	2,048					82,600	181			4,850	4,624	4,285	4,697
1982[1]	904.0[5]											5,080			

[1] Preliminary. [2] Domestic. [3] For consumption. [4] Owned by dealer & mfgrs., converted to a farm-sales weight equivalent. [5] Farmers' intentions to plant, MARCH 1. [6] Data prior to 1975 are in THOUSANDS OF POUNDS. [7] In packages & in bulk.

Source: Agricultural Marketing Service, U.S.D.A.

Tobacco Production in the U.S., by Types In Million Pounds (Farm–Sales Weight)

Types	11–14	31	32	21	22–23	35–36	37	41	42–44	72	51–52	54–55	61
1969	1,053	591	28.1	6.7	34.1	18.2	1.3	36.5	2.8	.1	2.3	13.2	15.9
1970	1,193	561	29.4	6.2	30.9	15.4	1.1	30.6	2.9	.2	2.9	18.4	14.9
1971	1,078	473	28.1	5.9	37.6	15.7	1.1	24.5	3.8	.2	2.8	22.5	12.4
1972	1,012	601	23.8	4.7	37.5	15.5	.8	18.2	4.2	.1	2.5	18.7	9.7
1973	1,157	450	31.5	5.7	27.7	12.4	.9	22.1	3.1	.2	2.7	19.0	9.8
1974	1,241	613	30.2	5.9	26.0	11.6	.9	26.0	3.1	.1	2.5	18.5	11.0
1975	1,415	639	21.9	4.9	32.6	14.0	.7	19.8	3.0	.1	2.4	20.8	7.7
1976	1,316	679	29.9	5.3	33.2	15.1	.8	23.6	2.8	.1	2.4	20.2	7.2
1977	1,130	617	30.1	7.2	45.2	20.4	.8	26.2	3.6	.1	2.5	24.4	5.3
1978	1,232	626	30.6	6.8	51.4	22.2	.9	25.2	3.0	.1	2.6	20.3	3.8
1979	946	446	22.0	5.4	39.6	16.1	.6	17.7	2.0	.1	2.4	25.1	4.0
1980	1,086	561	26.2	3.6	32.6	16.2	.4	24.7	2.4	.1	2.6	26.0	4.5
1981[1]	1,166	717	44.3	4.9	37.0	17.4	.6	25.2	2.6	.1	3.1	26.1	3.9
1982													

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

U.S. Exports of Unmanufactured Tobacco to Principal Importing Countries
In Millions of Pounds (Declared Weight)

Year	Australia	Belg.-Luxem.	Denmark	France	W. Germany	Thailand	Ireland	Japan	Netherlands	Norway	Italy	Sweden	Switzerland	United Kingdom	Total U.S. Exports
1969	20.2	17.4	19.1	8.6	102.2	24.3	10.5	40.9	33.6	7.2	19.5	13.9	26.4	134.2	577.5
1970	10.2	12.4	18.1	9.0	92.6	20.1	10.2	58.6	26.6	8.1	3.1	19.5	24.7	95.5	510.4
1971	10.9	15.6	16.7	10.1	100.0	18.9	9.0	18.6	28.1	4.3	16.4	14.7	18.2	89.8	473.3
1972	14.8	12.9	20.8	7.7	99.3	30.5	14.3	87.3	22.4	7.0	23.1	20.5	23.5	115.1	606.1
1973	13.9	16.7	37.0	6.6	99.9	8.6	8.9	79.0	31.6	5.7	21.8	17.1	31.4	119.7	612.5
1974	18.7	14.4	12.6	8.2	97.1	20.6	10.2	109.6	31.0	5.4	24.3	14.5	21.3	94.3	651.4
1975	15.5	8.1	16.4	9.5	91.0	18.7	8.2	81.5	29.9	5.6	31.5	15.3	25.9	78.5	563.0
1976	10.3	7.5	9.0	8.3	73.7	21.8	7.7	132.7	24.7	5.5	33.2	14.1	24.4	71.8	578.1
1977	14.2	10.4	16.9	6.3	78.9	16.0	5.4	135.4	30.5	6.0	40.6	11.8	28.8	46.8	628.6
1978	12.4	16.9	27.1	9.8	53.2	18.2	5.3	102.3	34.2	4.2	41.0	17.5	26.2	148.8	700.0
1979	12.4	5.4	16.4	11.5	67.7	18.8	6.9	95.9	29.3	5.7	34.8	13.7	19.3	68.2	567.4
1980	13.4	7.9	17.5	4.5	100.7	22.6	3.6	82.1	44.9	6.8	30.7	15.4	20.1	32.5	598.7
1981[1]	12.6	9.5	11.1	6.1	83.2	18.4	3.9	117.0	28.6	4.2	26.5	9.9	22.2	39.4	584.5
1982															

[1] Preliminary. *Source: Bureau of the Census*

Tung Oil

World tung oil production (including oil equivalent of seed production) for 1981/82 was estimated by the USDA at 90 thousand tonnes, unchanged from the previous season's production, and down from the 1979/80 production of 100 thousand tonnes.

The United States is the world's largest importer of this industrial oil. U.S. imports of tung oil in 1981 were down 7 percent to 6,819 tonnes from 7,366 tonnes in 1980.

Other major importers of tung oil are the Soviet Union, Japan, Poland, and the Federal Republic of Germany.

The People's Republic of China is, by far, the world's largest producer of tung oil, followed in most years by Argentina and Paraguay. These three countries are also the major exporters of tung oil.

Supply and Distribution of Tung Oil in the United States   In Thousands of Pounds

Year	Stocks Jan. 1	Production	Imports	Exports[3]	Total Supply	Appar. Disappearance	Factory Consumption							Acquired By CCC Oil
							Total	Paint & Varnish	Linol. & Oilcloth	Printing Ink	Lubricants[2]	Resins & Plastics	Drying Oil Ind.	
1969	60,700	5,000	22,464	1,800	86,400	31,404	31,300	21,400	[4]	[4]	[4]	5,000	31,000	5,500
1970	54,902	4,000	18,151	2,110	74,943	28,233	28,400	20,000				3,900	28,000	5,700
1971	47,710	100	22,239	1,962	68,087	23,282	27,200	17,100				3,700	23,000	3,800
1972	44,703	2,250	21,597	1,257	67,273	33,307	31,800	18,100				3,800	31,000	100
1973[1]	33,986	500	21,796	1,955	54,327	28,589	31,000	20,000				4,000	28,000	2,300
1974[1]	25,738	—	21,037	700	46,075	34,858	34,000	24,000				2,000	35,000	—
1975[1]	11,217	—	30,063	1,700	39,580	33,228	43,000	26,000				4,000	33,000	—
1976[5]	6,352	—	34,509	1,600	39,261	36,961	25,000						35,000	—
1977[5]	2,300	—	18,821	1,200	19,900	16,900	20,100						19,000	
1978[5]	3,000		17,912				16,900	7,200				3,700		
1979[5]	1,200		20,038				15,700	10,400				3,000		
1980[5]	3,500		16,239				16,000	8,300				3,700		

[1] Preliminary. [2] Also including greases. [3] Also including re-exports. [4] Included in misc. to avoid disclosure of figures for individual companies. [5] Estimate. *Source: Economic Research Service, U.S.D.A.*

Average Price of Tung Oil[1] (Imported-Drums) F.O.B. New York   In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1969	14.8	14.8	14.8	14.8	14.8	14.8	17.1	17.8	17.8	19.4	20.2	24.0	17.1
1970	24.0	23.9	25.4	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	25.6
1971	26.0	26.0	26.0	26.0	26.0	24.0	18.0	16.1	15.5	15.5	15.5	15.5	20.8
1972	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5
1973	15.5	15.5	15.5	15.5	17.1	20.0	N.A.	N.A.	31.0	31.2	33.8	35.0	23.0
1974	35.0	36.0	39.0	39.0	38.3	35.5	35.5	35.5	35.0	35.2	38.9	41.0	37.0
1975	41.0	41.0	41.0	41.0	41.0	41.0	41.0	35.4	32.2	33.0	33.0	33.0	37.8
1976	33.0	33.2	34.0	34.0	33.8	37.0	54.0	65.0	65.0	65.0	65.0	65.0	48.7
1977	65.5	72.7	97.0	142.4	147.0	147.0	128.2	100.0	100.0	100.0	100.0	100.0	108.3
1978	100.0	100.0	100.0	100.0	100.0	100.0	100.0	87.5	87.5	87.5	68.5	66.4	91.5
1979	68.9	68.9	67.9	69.0	69.0	69.0	69.0	69.0	62.5	55.0	51.0	51.0	64.2
1980	51.0	55.1	55.8	53.0	51.1	48.3	45.2	43.7	46.6	56.5	65.5	67.2	53.3
1981	69.6	68.0	64.0	60.3	62.9	64.5	64.0	64.0	62.1	60.3	58.5	58.5	63.1
1982	61.4	69.5	68.2										

[1] Carlots, imported, f.o.b. New York. *Source: Economic Research Service, U.S.D.A.*

Utilization of Oils and Fats in Drying-Oil Industries in the United States[1]   In Millions of Pounds

Year	Linseed Oil	Tall Oil	Tung Oil	Oiticica Oil	Castor Oil	Fish Oil	Soybean Oil	Other Primary Fats & Oils	Secondary Fatty Materials	Total
1970	230	75	28	—	28	25	169	49		598
1971	276	71	23	—	39	28	148	44		624
1972	206	73	31	—	54	32	141	33		564
1973	322	79	28	—	46	24	142	45		679
1974	194	67	35	—	26	27	172	42		558
1975	125	55	33	—	5	16	144	51		425
1976	170	71	35	—	39	10	164	58		541
1977[2]	156	85	19	—	63	11	172	37		604
1978[2]										703
1979[2]										479

[1] Paint, varnish, linoleum, oilcloth, and printing ink. [2] Preliminary. *Source: Economic Research Service, U.S.D.A.*

Tungsten

Tungsten materials may be divided into four major groups, depending on use. The uses are, in order of importance: (1) a carbide in cutting and wear-resisting materials such as drilling bits, and welding and hard-facing rods; (2) an alloy constituent in high-speed and tool and die steels, super alloys, and nonferrous alloys; (3) mill products made from essentially pure metal and used by the electrical, electronic and aerospace industries; and (4) various chemicals and compounds for nonmetallurgical applications. The unique high-temperature properties of tungsten and its alloys point to increased demand for this metal. Nevertheless, tool steel demand in 1981 weakened because of the recession.

Estimated world production and consumption of tungsten in concentrate each decreased about 4 percent in 1981 compared with 1980, primarily because of reduced demand for tungsten in tool steel, according to the U.S. Bureau of Mines. The world's largest producers of tungsten are China and the Soviet Union. The net import reliance of the U.S. for tungsten in 1981 was estimated by the Bureau of Mines at 52 percent of apparent consumption. The major sources of U.S. imports in 1981 were China, Bolivia, Canada, and Portugal. However, U.S. mine production of tungsten in concentrate increased an estimated 16 percent in 1981. A new tungsten mine and ammonium paratungstate (APT) plant in western Nevada could increase U.S. production considerably when full-scale operations begin in 1982.

U.S. production of APT, an intermediate product of tungsten concentrate containing 89 percent tungsten, was 11 percent higher in 1981 than in 1980, and consumption of APT was about 13 percent above that of the previous year. U.S. production of tungsten products in 1981 was almost 9 percent higher than in 1980. Reported consumption of scrap in 1981 was 15 percent lower than in 1980. Reported stocks of tungsten in concentrate at the end of 1981 were 10 percent higher than a year earlier, but stocks of intermediate products were 10 percent lower than at the end of 1980.

The average U.S. monthly price of tungsten concentrate, excluding duty, which was $133 per short ton unit (stu) WO_3 in January 1981, rose to $138 in March and then declined to a low of $109/stu WO_3 on December 31, 1981.

The General Services Administration (GSA) continued to offer excess tungsten concentrate for sale in 1981, at a rate of 12 million pounds a year. However, there were no bids for GSA offerings of 600,000 pounds of stockpile-grade tungsten concentrate in government stocks and 400,000 pounds of nonstockpile-grade tungsten in concentrate, as of late January 1982.

World Concentrate Production of Tungsten In Thousand Pounds of Contained Tungsten (60% WO_3 Basis)

Year	Japan	Argentina	Australia	Bolivia	Brazil	Burma	China	Rep. of Korea	Canada	Portugal	Spain	Thailand	U.S.S.R.	United States	World Total
1969	1,343	322	2,756	4,059	1,914	353	17,600	4,345	3,223	2,934	443	1,442	14,300	6,904	70,749
1970	1,882	317	2,800	4,068	2,549	487	13,200	4,564	2,956	2,390	899	1,565	14,800	9,625	71,360
1971	1,609	304	3,184	4,608	2,989	842	15,400	4,784	3,667	2,176	897	5,527	15,400	6,900	78,055
1972	1,980	348	3,487	4,954	2,515	1,213	16,500	3,966	3,527	3,093	798	7,370	15,900	8,150	84,952
1973	2,072	183	2,917	4,264	2,194	1,133	17,600	4,504	3,680	3,336	690	5,295	16,300	7,575	83,612
1974	1,786	207	3,128	4,471	2,189	750	18,700	5,046	2,822	3,236	765	4,497	16,800	7,381	82,832
1975	1,693	190	4,145	5,661	2,496	1,091	19,800	5,298	2,584	3,139	774	3,609	17,200	5,588	84,508
1976	1,795	137	4,385	7,015	2,209	608	12,600	5,703	3,792	2,776	725	4,519	17,600	5,830	83,883
1977	1,702	154	5,198	6,515	2,672	613	14,600	5,809	3,995	2,216	677	4,859	18,100	6,008	88,936
1978	1,709	214	5,911	6,288	2,568	1,038	15,700	5,511	5,046	2,433	789	7,026	18,700	6,896	96,137
1979	1,645	130	7,039	6,865	2,595	1,526	22,000	5,981	5,690	3,038	703	4,026	19,200	6,643	103,706
1980[1]	1,410	158	7,345	7,405	2,650	1,660	33,100	6,034	8,131	3,433	550	3,560	19,200	6,036	119,320
1981[2]			7,300	7,000	2,600	1,500	30,000	6,000	6,000	5,500		3,500	19,500	7,000	115,400
1982															

[1] Preliminary. [2] Estimate. *Source: Bureau of Mines*

TUNGSTEN

Salient Statistics of Tungsten in the U.S. In Thousands of Pounds of Contained Tungsten

Year	Net Import Reliance as a % of Apparent Consumption	Production[1]	Shipments from Mines[1]	Consumption of Tungsten Products by End Uses: Total Consumption	Steel: Tool	Steel: Stainless & Heat Assisting	Steel: Alloy Steel[3]	Superalloys	Cutting & Wear Resistant Materials	Pdt's. Made from Metal Powder	Cast Irons	Chemicals & Ceramic	Exports	Stocks at End of Year: Consumers & Dealers	Stocks at End of Year: Producers[1]
1969		7,805	7,910	13,053	1,951	N.A.	381	N.A.	7,275	2,898	N.A.	406	7,151	1,006	519
1970		9,625	9,312	16,700	1,475	N.A.	185	N.A.	7,028	3,306	N.A.	N.A.	19,470	1,467	787
1971		6,900	6,827	11,622	1,420	187	149	209	5,082	2,044	16	381	2,006	2,657	863
1972		8,150	7,045	14,107	1,451	173	157	429	6,657	2,525	14	179	95	2,229	1,966
1973	66	7,575	7,059	15,386	2,015	211	353	606	10,000	2,660	6	444	90	1,446	225
1974	68	7,381	7,836	16,298	2,045	258	641	607	12,239	2,673	1	159	1,187	1,565	529
1975	55	5,588	5,490	14,012	892	158	139	379	8,355	1,490	4	310	1,316	1,958	531
1976	53	5,830	5,869	16,107	1,133	126	244	435	10,402	2,432	4	704	1,729	1,002	150
1977	52	6,008	6,022	17,100	1,124	175	262	527	10,880	2,482	2	275	1,283	826	124
1978	56	6,896	6,901	18,806	1,385	236	152	641	11.550	2,725	1	393	1,853	1,424	87
1979	58	6,643	6,646	21,589	1,554	305	173	596	12,969	3,348	—	506	1,929	1,538	84
1980[2]	53	6,072	6,036	20,432	1,300	200	100	1,500	9,000	3,250	—	1,000	2,029	1,325	106
1981[4]	52		7,000	21,692	933	68	53	417	7,471	3,849	N.A.	1,178	175	1,461	100
1982															

[1] Primary concentrates. [2] Preliminary. [3] Other than tool. [4] Estimate. *Source: Bureau of Mines*

U.S. Imports[1] of Tungsten Ores and Concentrates and Ferrotungsten
In Thousands of Pounds (Tungsten Content)

Year	Tungsten Ores and Concentrates Imported (For Consumption): Australia	Bolivia	Brazil	Canada	Rep. of Korea	Mexico	Portugal	Spain	Thailand	Peru	Total 1,000 Pounds	Value Mil. $	Ferrotungsten Imported: Austria	France	West Germany	Total 1,000 Lbs.
1969	101	—	—	1,046	—	1	99	—		256	1,503	3.4	0	0	0	0
1970	—	—	—	1,234	—	12	—	—		38	1,284	3.2	0	0	0	0
1971	58	—	—	203	—	81	—	—		76	418	1.0	0	0	0	30
1972	392	780	124	1,634	370	90	9	—	883	814	5,739	12.1	25	10	88	814
1973	320	2,183	465	3,311	548	348	176	79	954	1,039	10,834	23.7	333	26	157	1,107
1974	87	2,065	266	1,633	364	336	1,635	95	1,527	1,375	11,096	40.7	235	112	—	808
1975	390	787	187	1,600	513	419	197	14	629	866	6,570	31.7	132	34	18	418
1976	172	580	2	1,343	202	417	420	21	588	863	5,301	28.3	260	246	53	844
1977	128	1,580	108	2,046	69	647	199	—	518	626	6,919	55.9	282	—	18	505
1978	211	2,012	2	3,030	230	850	—	—	840	180	9,138	67.7	241	110	63	575
1979	398	2,980	26	3,127	84	607	195	20	1,246	810	11,352	84.7	104	83	25	570
1980[2]	235	2,794	63	2,914	19	515	576	94	1,046	526	11,372	87.1	68	10	17	446
1981[3]	320	2,511	460	2,086	753	634	1,183	49	706	652	14,573					
1982																

[1] Imports for consumption. [2] Preliminary. [3] Estimate. *Source: Bureau of Mines*

Tungsten Prices In Dollars

Year	Markets: U.S.[1]	Markets: European	Reported Value, F.O.B. U.S. Mine[2]: Total (Mil. $)	Avg. per Unit of WO_3	Avg. per Lb. of Tungsten	Year	Markets: U.S.[1]	Markets: European[1]	Reported Value, F.O.B. U.S. Mine[2]: Total (Mil. $)	Avg. per Unit of WO_3	Avg. per Lb. of Tungsten
1972			18.1	40.77	2.56	1978	128.19	130.43	56.7	130.29	8.22
1973			19.2	43.04	2.71	1979	127.31	125.95	55.8	133.13	8.40
1974			37.4	75.73	4.77	1980	131.07	129.87	50.6	132.9	8.38
1975			29.1	84.05	5.30	1981[3]	130.00	130.00			
1976	—	103.68	37.3	100.70	6.35	1982					
1977	148.88	155.03	55.1	145.03	9.15	1983					

[1] Conc., Stu WO_3, Average (a short ton unit [stu] of tungsten trioxide [WO_3] contains 15.862 pounds of tungsten. [2] Values apply to finished concentrate & are in some instances f.o.b. custom mill. [3] Preliminary. *Source: Bureau of Mines*

Turkeys

The 1981 turkey crop totaled 170.7 million head, up 4 percent from 1980, setting a record. Heavy breed turkeys increased 6 percent to 159 million, but light breeds declined 21 percent to 12 million.

Turkey meat output in federally inspected plants totaled a record 2.416 billion pounds (ready-to-cook weight) in 1981, up 7 percent from 1980. The number of turkeys inspected was up 3 percent, and the average weight was 3 percent heavier.

Further processing of whole birds (those which have been injected, basted, marinated, or smoked, and packaged whole) gained 4 percent to 648 million pounds. Cut-up turkey was up 2 percent to 552 million pounds. Further processing of turkeys other than whole birds declined 2 percent and totaled 884 million pounds in 1981. This equaled about 37 percent of total certified ready-to-cook output under Federal inspection, down from 40 percent in 1980.

Turkey meat consumption totaled an estimated record 10.6 pounds per person in 1981, compared with 10.4 pounds in 1980. Consumption showed a smaller increase than production, largely because of a growing population and a buildup in cold storage stocks in 1981. In 1980, there was a 42-million-pound reduction in turkey stocks. In spite of depressed prices and record movement late in 1981, storage stocks on January 1, 1982, were larger than the low levels of a year earlier. Stocks totaled 238 million pounds, 40 million more than a year earlier and about equal to stocks on January 1, 1980.

Prices in 1981 trended generally upward through July, then began declining as stocks hit an alltime high. Prices for young hens (8 to 16 pounds, New York) averaged 67 cents a pound in July 1981 then declined to 52 cents in December. Prices for heavier toms were above those for young hens. This was in line with reduced consumer demand for the smaller young hens and increased demand for the heavier toms for further processing.

Rising prices early in 1981, the dollar's strength relative to other currencies, and increased competition from The European Community limited turkey exports in 1981. Exports of whole turkeys and turkey parts (excluding livers) totaled 63 million pounds, 12 million below the previous year. The Federal Republic of Germany, our largest customer, took 12 percent fewer pounds than in 1980. Egypt, our second largest customer, reduced imports by 54 percent in 1981. Parts accounted for 72 percent of the turkey export market in 1981, versus 80 percent in 1980.

Shipments of turkey meat to U.S. territories totaled 5.4 million pounds, down from 6.3 million in 1980.

In 1981, the USDA purchased 64 million pounds of ready-to-cook fresh frozen young turkey in whole and roast forms. Roasts, produced from the breast and thighs of the birds, were purchased for the first time in 1981. In 1980, purchases of ready-to-cook fresh frozen young whole turkeys and turkey rolls totaled 82.7 million pounds. Rolls were prepared from the whole carcass of the bird.

Salient Statistics of Turkeys in the U.S.

Year	Breeder Hens on Farms—Dec. 1			(Liveweight)		Gross	Ready-to-Cook Basis						In Cents Per Lb.			
											Consumption					
											Civilian		Production Costs Live-Weight		Wholesale Ready-to-Cook	
	Number	$ Value Per Head	Raised	Produced Million Lbs.	Price ¢ Lb.	Income Million $	Production	Commercial Storage Jan. 1	Exports & Shipments	Military	Total	Per Capita Lb.	Feed	Total	Total Costs	3-City Composite Price
	In Millions						Million Pounds									
1970	3.4	5.82	116.1	2,198	22.6	498	1,729	192	43	49	1,610	8.0				
1971	3.4	6.18	119.7	2,256	22.1	500	1,772	219	27	41	1,700	8.3				
1972	3.3	6.46	128.7	2,424	22.2	537	1,909	223	42	42	1,840	8.9	13.5	20.5	34.1	35.8
1973	3.6	9.47	132.2	2,452	38.2	936	1,933	208	54	31	1,775	8.5	25.6	33.1	50.6	64.2
1974	2.9	9.81	131.9	2,437	28.0	683	1,921	281	43	14	1,870	8.9	22.5	30.7	48.8	45.6
1975	3.1	10.81	124.2	2,277	34.8	793	1,803	275	53	19	1,811	8.6	22.1	30.7	49.4	55.1
1976	3.1	11.12	140.0	2,606	31.7	825	2,059	195	71	18	1,961	9.2	22.4	31.4	50.9	51.0
1977	3.0	11.32	136.4	2,563	35.5	910	2,023	203	56	11	1,992	9.3	22.6	31.6	51.4	56.2
1978	3.4	12.53	138.9	2,655	43.6	1,157	2,098	168	57	15	2,019	9.2	22.1	31.7	51.7	68.8
1979	3.7	13.58	156.5	2,958	41.1	1,214	2,343	175	57	19	2,204	9.9	25.3	35.8	58.2	67.0
1980[1]	3.7	14.33	164.7	3,071	41.3	1,269	2,396	240	81	16	2,341	0.4	26.1	37.1	61.0	66.0
1981[2]	3.4						2,600	198	75	15	2,433	10.7	30.5	41.5	63.4	64.3
1982								238								

[1] Preliminary. [2] Estimate. *Source: Economic Research Service, U.S.D.A.*

Turkey Per Capita Consumption in the U.S. by Quarters In Pounds

Year	First	Second	Third	Fourth	Total	Year	First	Second	Third	Fourth	Total
1971	1.0	1.2	2.1	4.1	8.4	1977	1.3	1.5	2.3	4.2	9.3
1972	1.1	1.3	2.2	4.4	9.0	1978	1.3	1.7	2.2	4.0	9.2
1973	1.2	1.3	2.1	3.9	8.5	1979	1.5	1.9	2.3	4.2	9.9
1974	1.2	1.6	2.0	4.1	8.9	1980[1]	1.8	2.0	2.6	4.0	10.4
1975	1.1	1.4	2.0	4.1	8.6	1981[1]	1.0	1.9	2.5	4.6	10.7
1976	1.2	1.5	2.1	4.4	9.2	1982					

[1] Preliminary. *Source: Economic Research Service, U.S.D.A.*

TURKEYS

Turkey producers in 1981 had negative returns in all but the second quarter. These returns, along with unfavorable prospects for the first half of 1982, were expected to push production down in 1982. In late 1981, producers in the 20 major turkey-producing states indicated they planned to raise 4 percent fewer turkeys in 1982 than in 1981. Intentions for heavy breeds were down 3 percent, and light breeds 19 percent. Those 20 states accounted for 97 percent of the turkeys raised in 1981.

The inventory of breeder hens indicated there could be tight supplies of eggs to meet intentions. Breeder hens on December 1, 1981, were 9 percent below a year earlier. Heavy breed hens were down 7 percent, and light breeds dropped 31 percent.

Turkey poults hatched in the first three months of 1982 were 8 to 9 percent fewer than during the corresponding period of 1981. And, turkey eggs in incubators on April 1, 1982 totaled 26.4 million, 3 percent below the April 1, 1981 total.

Turkey prices were forecast to average below year-earlier levels during the first half of 1982 before rising above 1981's exceptional lows during the second half of the year. Reduced production and lower supplies of red meats, especially pork, were expected to firm prices in the second half of 1982.

Storage Stocks of Turkeys (Frozen) in the United States In Millions of Pounds

Year	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1971	218.9	207.1	177.3	146.0	119.4	111.5	140.3	202.8	307.6	389.0	475.2	308.7
1972	223.1	208.0	178.5	144.5	121.3	111.1	143.4	213.2	314.0	408.5	472.9	297.3
1973	208.1	188.4	152.6	115.4	91.3	88.1	137.1	199.4	261.2	350.7	450.5	321.1
1974	281.0	274.0	250.5	235.9	225.0	227.4	265.8	335.8	431.8	528.7	554.6	372.0
1975	275.0	267.1	239.9	207.3	180.2	162.7	193.2	248.6	328.6	409.8	472.4	286.2
1976	195.2	186.8	160.7	140.7	114.5	120.8	177.3	261.8	370.3	459.7	512.3	298.8
1977	203.4	190.3	167.8	142.3	130.3	138.2	201.4	253.6	329.9	409.3	444.5	269.4
1978	167.9	168.2	136.6	113.0	101.1	103.9	152.8	213.6	301.2	373.3	425.4	236.2
1979	175.1	170.7	154.7	135.7	128.0	153.1	200.9	272.5	382.5	432.3	445.5	281.2
1980	240.0	246.8	225.0	208.9	206.6	233.8	286.6	325.8	384.0	398.8	420.2	257.6
1981[1]	198.0	208.3	207.9	220.7	228.7	255.8	327.3	400.8	466.0	532.1	528.1	305.1
1982[1]	238.4	236.9	236.4	234.9								

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

Wholesale Price of Frozen Eviscerated Tom Turkeys,[1] N.Y.C. In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Yearly Avg.		
													Avg.	Hens (12–14 lbs.)	Farm Price[2]
1970	44.8	47.0	49.1	49.9	50.4	50.8	50.6	50.5	49.5	43.1	42.2	43.4	47.6	43.5	23.6
1971	43.5	43.3	41.7	32.7	40.4	40.5	41.4	42.5	42.5	41.2	42.3	43.8	41.4	39.6	21.9
1972	43.8	43.6	34.1	43.4	42.6	42.1	40.3	39.1	38.5	38.9	41.1	42.1	40.8	38.5	22.1
1973	45.1	48.6	56.0	57.7	60.6	67.8	69.4	81.1	86.0	84.2	80.2	71.2	67.3	62.2	34.8
1974	60.7	54.2	51.9	45.3	48.4	52.5	52.6	55.8	55.7	54.4	56.3	58.8	53.9	51.7	28.8
1975	59.0	56.7	55.9	52.0	52.6	56.5	59.5	61.8	64.3	66.8	69.9	70.0	60.3	57.0	34.8
1976	69.0	69.0	69.9	70.0	70.6	71.0	71.0	71.0	71.0	71.0	72.8	73.0	70.8	52.4	31.7
1977	72.5	70.2	68.8	68.8	69.0	70.1	72.1	73.2	73.6	74.6	75.5	78.2	72.2	57.3	35.5
1978	78.5	78.5	78.9	79.0	82.2	86.1	86.8	87.0	87.0	89.1	91.6	90.7	84.6	70.3	43.6
1979	91.0	90.8	90.0	89.5	90.9	91.0	91.0	91.5	91.4	93.1	94.5	92.9	91.5	72.1	41.9
1980	88.2	84.8	80.4	78.1	78.0	78.9	82.0	87.3	90.1	91.3	88.5	89.5	84.8	67.8	40.0
1981	89.1	89.9	89.4	92.9	96.2	99.6	103.5	106.2	94.0	86.0	91.2	91.3	94.1	64.7	38.4

[1] Heaviest weights quoted. [2] Live turkeys. *Source: Economic Research Service, U.S.D.A.*

Turkeys Certified as Wholesome in Federally Inspected Plants Ready-To-Cook Weight In Millions of Lbs.

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1970	40.5	22.2	22.1	27.6	44.9	109.5	172.1	212.0	244.6	276.9	244.9	149.2	1,567
1971	49.9	31.5	42.7	47.7	63.1	127.7	177.1	221.2	235.8	256.0	242.9	146.1	1,642
1972	57.6	45.2	45.8	44.3	74.6	149.0	186.9	254.6	241.7	282.7	261.3	152.7	1,797
1973	69.7	41.6	45.3	55.8	84.2	142.9	185.0	234.1	212.3	272.6	269.9	174.6	1,788
1974	97.3	59.8	58.9	80.1	113.2	159.7	213.1	237.2	220.2	261.1	215.2	119.9	1,836
1975	64.9	47.1	54.4	68.7	81.9	138.4	193.2	203.3	229.0	257.5	220.2	157.5	1,716
1976	76.3	61.7	68.6	79.9	106.5	182.2	213.9	243.8	252.8	256.6	261.5	146.4	1,950
1977	70.5	58.7	80.3	78.9	110.0	176.5	189.6	244.4	238.2	250.3	246.8	148.2	1,892
1978	81.8	59.7	86.3	80.8	129.3	189.5	199.9	248.8	230.9	271.2	248.9	156.3	1,983
1979	99.3	77.2	95.0	112.3	157.3	195.9	219.2	267.7	233.0	297.5	261.9	165.5	2,182
1980	141.1	109.4	123.2	141.4	177.5	204.2	240.2	225.5	239.8	271.5	241.8	190.8	2,263
1981	140.0	118.6	134.0	149.8	178.3	224.3	249.4	257.9	270.6	290.1	275.9	204.1	2,416

Source: Economic Research Service, U.S.D.A.

Turpentine and Rosin

U.S. Production of Gum Turpentine and Miscellaneous Naval Stores In Barrels of 50 Gallons

Crop Year—April 1 to March 31	Exports of Pine Oil	Gum Turpentine				Miscellaneous Naval Stores			
		Florida	Georgia	Other States	Total	Stocks of Pine Oil (Mar. 31)	Pine Oil (All Sources[3])	Other Steam Distilled Terpenes	Stocks of Other Steam Distil. Terp. (Mar. 31)
1976–7[1]	69,310				17,420	32,830	190,060	45,220	21,860
1977–8[1]	71,250				14,530	26,730	189,780	46,430	19,580
1978–9[1]	103,370				9,740	11,840	192,680	52,880	7,500
1979–0[4]	193,340				6,740	17,460	192,700	59,070	10,040
1980–1[4]					6,260				

[1] Preliminary. [2] Included in other states. [3] Includes production from imported pine wood extract. [4] Forecast.
Source: Crop Reporting Board, U.S.D.A.

Supply and Distribution of Turpentine in the United States In Thousands of Barrels (50 Gallon Barrels)

Crop Year Beginning April 1	April 1 Carryover			Production			Imports For Consumption	Available Supply			Exports	App. Consumption		
	Gum	Wood	Total	Gum	Wood	Total		Gum	Wood	Total		Gum	Wood	Total
1976–7	9.6	104.0	113.6	17.4	464.8	482.2	16.3	42.7	569.4	612.1	20.3	33.3	430.8	464.1
1977–8	7.4	120.4	127.8	14.5	462.6	477.1	7.9	29.4	583.5	612.9	19.4	23.7	478.8	502.6
1978–9	4.8	86.1	90.9	9.7	498.0	507.7	7.1	21.0	584.7	605.7	15.3	17.2	498.6	515.8
1979–0[1]	3.3	71.3	74.6	6.7	521.1	527.8	7.9	17.8	592.5	610.3	13.5	14.0	509.5	523.5
1980–1[2]	3.2	70.1	73.3				12.7				23.1			
1981–2	No Longer Available													

[1] Preliminary. [2] Estimate. *Source: Crop Reporting Board, U.S.D.A.*

United States Industrial Consumption of Rosin and Turpentine, by Industries

Beginning April 1	Rosin[1] (Drums of 520 Lbs. Net[2])						Turpentine (Barrels of 50 Gallons)			
	Chemicals & Rubber	Ester Gum & Synthetic Resins	Paint, Varnish & Lacquer	Paper & Paper Size	Other Industries	Total	Chemicals & Rubber	Paint, Varnish & Lacquer	Other Industries	Total
1976–7	445,870	283,060	22,260	370,370	81,220	1,202,780	476,160	740	3,690	480,590
1977–8	376,040	241,940	22,260	357,560	75,750	1,073,550	464,150	1,020	8,110	473,280
1978–9	362,100	233,130	19,440	463,610	89,540	1,167,820	496,840	650	7,780	505,270
1979–0[3]	353,650	268,020	21,660	352,510	68,690	1,064,530	497,720	410	6,180	504,310
1980–1	No Longer Available									

[1] Includes B-wood resin. [2] Gum rosin in drums of 517 lbs. [3] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

Supply and Distribution of Rosin in the United States In Thousands of Drums (520-lb. Net Weight Drums)

Crop Year Beginning April 1	April 1 Carryover			Production			Imports For Consumption	Available Supply			Exports	Apparent Consumption		
	Gum	Wood	Total	Gum	Wood	Total		Gum	Wood	Total		Gum	Wood	Total
1976–7	60	173	232	61	1,296	1,357	25	135	1,480	1,615	280	85	1,069	1,154
1977–8	36	145	181	51	1,250	1,301	31	114	1,399	1,513	215	79	987	1,066
1978–9	21	211	232	35	1,304	1,339	55	97	1,528	1,626	328	59	1,023	1,082
1979–0[1]	20	195	215	24	1,339	1,363	52	93	1,538	1,631	396	56	1,041	1,097
1980–1[2]	19	119	138				39				383			
1981–2	No Longer Available													

[1] Preliminary. [2] Estimate. *Source: Crop Reporting Board, U.S.D.A.*

U.S. Market Prices & Value of Gum Naval Stores In Dollars

Crop Yr. Beg. April	Avg. Price Received By Producers[1]	Market Price		Market Value of Production		Crop Yr. Beg. April	Avg. Price Received by Producers[1]	Market Price		Market Value of Production	
		Turpentine, Per Gallon	Rosin, Per 100 Lbs.	Turpentine	Rosin			Turpentine, Per Gallon	Rosin, Per 100 Lbs.	Turpentine	Rosin
				Thousand Dollars						Thousand Dollars	
1969–0	36.57	1.138	11.80	1,991	7,244	1976–7	59.46	1.427	24.46	1,278	7,971
1970–1	47.37	1.200	15.03	1,550	6,818	1977–8	65.46	1.425	25.35	1,035	6,702
1971–2	51.14	1.200	16.93	1,702	6,210	1978–9	67.82	1.610	27.54	784	4,925
1972–3	55.17	1.046	18.89	1,389	8,694	1979–0	82.19	2.036	35.05	686	4,385
1973–4	60.97	.806	22.72	863	8,737	1980–1	No Longer Available				

[1] Per standard barrel for commercial crude gum delivered at central stills. *Source: Economic Research Service, U.S.D.A.*

Uranium

The U.S. produced 19,240 tons of uranium oxide (U_3O_8) in 1981, according to preliminary estimates of the U.S. Department of Energy (DOE). Production declined 12 percent from the DOE estimate of 21,850 tons produced in 1980, but it was still nearly 3 percent larger than 1979 production of 18,730 tons. Production in 1981 included 15,660 tons produced from mined uranium ore (vs. 18,510 tons in 1980) and 3,580 tons from other sources (vs. 3,340 tons in 1980) including solution mining, heap leaching, and as a byproduct from other activities. Of the uranium produced from other activities, 1,285 tons were produced as a byproduct of phosphoric acid production, compared with 800 tons in 1980.

The decrease in production reflected the effects of the closing of many of the industry's mines and mills in 1980. Production declines in the U.S. could continue unless mines and mills are reopened, especially as stockpiled ore was worked down in 1980 and 1981.

Production remained significantly greater than estimated 1981 U.S. consumption of approximately 17 million pounds which was believed to be slightly larger than in 1980.

Nuclear Safety

The nuclear power industry is still feeling the effects of the Three Mile Island (TMI) accident. The TMI-2 plant remains closed but the cleanup is proceeding. New plant construction continues in a regulated and costly environment. The Nuclear Regulatory Commission (NRC) granted 3 operating licenses (for commercial operation) in 1981 but it later suspended one of these licenses (the Diablo Canyon 2 plant in California). No new reactors were ordered in 1981 nor was construction of any new reactors begun. Moreover, 6 reactors were canceled in 1981 and 44 reactor projects were delayed.

Prices

Spot market uranium prices continued to decline throughout 1981, edging lower from around $25 per pound in early 1981 to around $23 per pound in early 1982. Prices continued to be depressed by the influence of spot market sales by utility companies who are still burdened by large stocks and high carrying costs. Six such sales were reported to the DOE in 1981.

The average price per pound of all uranium sold in 1981 (including uranium sold under long term contracts between utilities and uranium producers) was preliminarily estimated by the DOE at $31 per pound vs. an estimated $28.15 and $23.85, respectively, in 1980 and 1979. Despite the lower spot market prices, the escalator clauses in many of the long term contracts have resulted in a steadily rising average price per pound.

The prospect for near term growth in demand appears limited by long plant construction time, the complicated and lengthy regulatory process and high interest rates. However, the decline in production of uranium suggests that spot market prices may be steadier in 1982.

Free-World Production of Uranium Oxide (U_3O_8) Concentrate In Thousands of Short Tons

Year	Argentina	Australia	Canada	Spain	Namibia	Gabon	France	Portugal	Niger	Malagasy Rep.	Sweden	South Africa	United States	World Total
1969	.1	.3	3.9	.1		.5	1.8	.1	—	—	.1	4.0	12.3	23.1
1970	.1	.3	4.1	.1		.4	1.9	.1	.1	—	.1	4.1	12.9	24.2
1971	.1	—	4.1	.1		.6	1.9	.1	.5	—	.1	4.2	12.3	23.9
1972	.1	—	4.9	.2		.6	1.9	.1	1.0	—	.1	4.0	12.9	25.6
1973	.1	—	4.8	.1		.8	2.0	.1	1.2	—	.1	3.4	13.2	25.5
1974	[1]	—	4.8	.1		1.0	2.1	.1	1.5		.1	3.5	11.5	24.6
1975	[1]	—	6.1	.1		1.2	2.2	.1	1.8		.1	3.2	11.6	26.7
1976	[1]	.5	6.7	.2	.8	1.2	2.3	.1	1.9		.1	3.6	12.75	30.1
1977		1.0	7.0	.2	1.5	1.2	2.4		2.1			4.0	14.94	33.8
1978													18.49	43.0
1979													18.73	50.0
1980													21.85	
1981[2]													19.24	

[1] Less than 50 tons. [2] Preliminary. *Source: Bureau of Mines, Dept. of Energy.*

U.S. Salient Statistics of Uranium (Depleted) Nonenergy Data in Short Tons

Year	Production	Imports[3]	Exports	Apparent Consumption (Nonenergy)	Price, Derby Metal $ Per Lb.
1976	17,591	188	341	1,700	2.00
1977	18,822	453	273	2,000	2.50
1978	15,763	373	590	2,200	2.50
1979[2]	15,116	852	1,531	2,500	3.25
1980[1]	18,000	1,000	7,000	3,500	4.50
1981					

[1] Estimate. [2] Preliminary. [3] For consumption. *Source: U.S. Bureau of Mines, Dept. of Energy*

Vanadium

Vanadium is usually produced as a byproduct or coproduct of another element, such as uranium or phosphorus in this country, and iron elsewhere. Its main use is as an alloying ingredient in steel, commonly added to iron and steel as ferrovanadium. For chemical purposes, vanadium is supplied as a compound, the most common compounds being vanadium pentoxide and ammonium metavanadate. The U.S. net import reliance in 1981 for vanadium was estimated at 42 percent of apparent consumption.

Preliminary U.S. Bureau of Mines figures indicated that U.S. vanadium consumption in 1981 of about 13.2 million pounds (contained vanadium) was higher than for any year since 1974. Yet, of the major end uses, only catalysts and high-strength low alloy (HSLA) steels had increased consumption. Approximately 87 percent of the vanadium was consumed by the iron and steel industry as ferrovanadium or related vanadium-iron-carbon ferroalloys, of which about 38 percent was used in HSLA steels, according to trade estimates. HSLA steels are favored for automobiles, trucks, structural steels, and large diameter natural gas and oil pipelines, where a combination of weight savings and strength is desirable.

U.S. mine production of vanadium in 1981 was about 10 percent larger than in 1980, according to preliminary data of the U.S. Bureau of Mines. A new uranium-vanadium mill became fully operational in Utah, but two other facilities in Colorado were closed for a large part of the year.

U.S. consumer stocks of vanadium on December 31, 1981 (mostly ferrovanadium) were about 22 percent smaller than at the end of 1980.

Major sources of U.S. imports of ferrovanadium in 1981 were Canada, West Germany, and Belgium-Luxembourg. Major sources of vanadium pentoxide imports were the Republic of South Africa, China and Finland.

The USSR and the Republic of South Africa are the world's largest producers of vanadium materials. In late 1981, the Soviet news agency, Tass, announced the discovery of vanadium and nickel-rich bituminous deposits in western Kazakhastan. The proposed development of these deposits could enable the Soviet Union to surpass the Republic of South Africa in the production of vanadium materials, according to the U.S. Bureau of Mines.

Among the various metals that are interchangeable to some degree with vanadium are columbium, molybdenum, manganese, titanium, and tungsten. Platinum may be used as a substitute for vanadium compounds as a catalyst in some chemical processes.

World Production of Vanadium in Ores and Concentrates In Short Tons (of Contained Vanadium)

Year	USSR	Chile	China	Finland	Australia	Norway	South West Africa[1]	South Africa	United States[1]	World Total[4]
1970	3,800	610		1,450	—	1,110	730	6,530	5,252	20,502
1971	2,917	660		1,222	—	1,190	443	7,127	5,318	19,939
1972	2,720	720		1,312	—	1,060	650	8,230	4,887	20,239
1973	4,246	1,060		1,388	—	820	715	9,047	4,377	21,653
1974	3,230	640		1,635	—	500	903	8,984	4,870	20,762
1975	8,800	660		1,405	—	510	619	11,734	4,743	28,471
1976	8,800	1,199	N.A.	1,598	—	580	771	10,885	7,376	31,209
1977	10,000	950	N.A.	2,055	—	590	826	12,388	6,504	33,313
1978	10,500	760	2,200	3,092	—	510	485	12,400	4,272	34.219
1979	11,000	500	4,000	3,051	—	630	—	13,600	5,520	38,301
1980[2]	11,000	400	5,000	3,100	650	600	—	14,000	4,806	39,556
1981[3]	12,000		5,500	2,700				12,000	5,300	39,250

[1] Recoverable vanadium. [2] Preliminary. [3] Estimate. [4] Total only for countries shown. *Source: Bureau of Mines*

Salient Statistics of Vanadium in the United States In Short Tons of Contained Vanadium

	Vanadium in Ores & Concentrates		Prod. of Vanad. Pentoxide (V_2O_5)			Vanadium Consumed by Uses[2]									Exports	
Year	Mine Production	Recoverable Vanadium		Consumer Stocks Dec. 31	Tool Steel	Cast Irons	Hi-Strength Low All.	Nonferrous Alloys	Chemicals	Carbon	Full Alloy	Total	$ Per Lb. Van. Pentoxide[3]	General Imports[5]	Ore & Concentrates[4]	Ferro-Vanadium (Gross Weight)
1970	5,793	5,319	9,986	1,024	473	51	2,420	485	136	1,050	N.A.	5,134	1¾–2.6	2,000	973	2,155
1971	5,547	5,252	9,448	645	441	56	2,530	363	114	830	N.A.	4,802	1.68	2,350	260	676
1972	4,699	4,887	9,367	788	620	60	2,062	353	147	630	1,088	5,227	1.50	1,400	176	269
1973	4,117	4,377	8,683	1,291	997	56	2,252	527	163	687	1,544	6,393	1.50	2,600	232	1,416
1974	5,240	4,870	9,583	1,984	936	52	2,398	722	255	900	1,744	7,200	2.12	2,485	203	1,335
1975	5,213	4,743	8,674	1,141	413	59	2,004	425	239	931	1,307	5,501	2.76	2,895	215	1,018
1976	8,076	7,376	11,063	1,080	565	61	1,636	313	212	516	1,311	4,720	2.90	2,998	99	1,210
1977	7,565	6,504	9,297	845	549	35	1,800	323	110	688	1,419	5,261	2.90	2,812	192	658
1978	4,446	4,272	9,290	974	858	59	2,440	467	123	1,051	1,506	6,630	3.17	2,234	1,721	1,309
1979	5,841	5,520	10,279	976	852	62	2,410	563	81	1,096	1,522	6,719	3.39	2,442	1,047	1,231
1980[1]	5,832	4,806	9,829	879	653	54	1,986	728	59	1,114	1,420	6,139	3.54	1,786	1,919	1,605
1981[6]		5,300		660	526	42	2,111	708	58	1,281	1,795	6,612	3.52	1,868	462	434

[1] Preliminary. [2] Represent about 90% of the total consumption. [3] Dealer export. [4] Also includes fused vanadium oxide. [5] Ores, slags, residues, & pentoxides. [6] Estimate. *Source: Bureau of Mines*

Wheat and Flour

Global wheat production in the 1981/82 season was estimated by the USDA at a record 452 million tonnes, 3 percent above 1980/81 production. A record outturn for North American crops more than compensated for reduced harvests in the Soviet Union and Eastern Europe. Total production was at an all-time high for the five major exporters. The most significant reduction was a 10-million-ton shortfall in the Soviet Union, caused by drought. This was the third successive poor wheat crop in that country, forcing it to again be the largest single wheat importer.

World utilization of wheat in 1981/82 was projected to fall below production, resulting in a slight increase in carryover stocks. Most of the increase in the carryover was expected in the exporting nations. The stocks to use ratio was projected at about 17 percent, below the average of 21 percent for the early 1970's. (It should be noted that stocks data are based on an aggregate of differing local marketing years and should not be construed as representing world stock levels at a fixed point in time.)

Global wheat trade during 1981/82 (July/June) was expected to top 100 million tons for the first time —reaching 101 million. This was 7 million tons more than in 1980/81 and over 40 percent above the average yearly trade for the 1970's. The high level of trade in 1981/82 was fueled by smaller production in major importing countries and sharply higher production in major exporting countries. Because of larger production and total supply, the United States was the major beneficiary of the increased trade.

In the United States, 1981/82 wheat supply totaled a record-large 3,784 million bushels, compared with the previous record 3,278 million in 1980/81. Total domestic disappearance of wheat was estimated at 867 million bushels, 11 percent more than the 779 million bushel domestic use in 1980/81.

U.S. wheat exports for the 1981/82 season were estimated at a record-large 1,800 million bushels, compared with 1,510 million in the 1980/81 season. This season's stepped-up overseas business stemmed from large purchases by the Soviet Union and China. Compared with last year, Eastern Europe was the only major U.S. market that was down significantly, partly because of credit financing problems and political instability. Comparable shipments to China and Mexico were also lower. Exports by class indicate that soft wheats were responsible for trade strength, although hard wheat shipments were well on the way to a new high. Dockside prices favored bargain buying of Soft Red Winter wheat (SRW). China was the most important purchaser of SRW with Turkey also being a sizable buyer. Soviet purchases were almost exclusively Hard Red Winter wheat (HRW).

Although 1981's HRW production was down 6 percent, supplies were at an all-time high as 1981/82 began. And despite strong export activity during June–December, January 1, 1982 stocks of HRW totaled over a billion bushels for the second successive year, slightly up from a year ago. Nearly 365 million bushels of these stocks were either CCC-owned or in the farmer-owned reserve program. These stocks, isolated from the market, accounted for over a third of the total wheat supply and were expected to represent a major portion of projected year-end carryover. Total 1981/82 HRW disappearance was projected to exceed production, pulling June 1, 1982 stocks down to around 440 million bushels. Thus, readily marketable HRW supplies prior to the 1982 harvest were expected to be tight. However the potential for a record 1982 harvest could hold off any significant price advances.

Despite a sharp increase in exports of SRW during June–December, January 1, 1982 stocks were up 50 percent from a year ago. The bumper 1981 crop—238 million bushels over 1980's—increased SRW supplies 50 percent and caused farm prices in many locations to plummet to near or below the $3.20-a-bushel loan level. In recent years, the supply/demand situation for SRW has been characterized by high stocks as the year began, with expanding disappearance through the season that consumed most of the year's production. Most of this 1981's record crop was expected to be sold off again, resulting in a carryover of 60 to 70 million bushels compared with carryin stocks of 38 million.

Winter wheat growers planted over 66 million acres in the fall of 1981. Although up only slightly from 1981, this is the largest winter wheat acreage in history. Based on this acreage and early estimates of good to excellent crop development, production was forecast at a record 2.13 billion bushels for 1982. However, the final outcome of the harvest rests on the weather and with growers' participation in the 15-percent wheat acreage set-aside program which was announced after the crop was planted.

U.S. Government Price Support Program

Under provisions of the Agriculture and Food Act of 1981, the 1982 "regular" and Reserve loan rates were set at $3.55 and $4.00 per bushel vs. $3.20 and $3.50, respectively, in 1981. The "trigger" release price for 1982 crop wheat remained at $4.65 per bushel, the same as for 1981 crop wheat. The Grain Reserve is open for immediate entry of 1982 crop wheat. Producers entering wheat in the Reserve will receive an additional 26½ cents per bushel first year storage payment in advance. The 1982 target price was set at $4.05 per bushel vs. $3.61 in 1981. Deficiency payments for 1982 crop wheat, as they were made for the 1981 crop, will be based on the difference between the target price and the higher of either the "regular" loan rate or the June–October national weighted average farm price.

However, only producers who complied with the 1982 15-percent wheat acreage set-aside program were eligible for "regular" and Reserve loans, and target price protection. Producers had until April 16, 1982 to enroll their acreage in the program and they had to certify their compliance with the provisions of the program by May.

Futures Markets

Wheat futures are traded on the Chicago Board of Trade, the Kansas City Board of Trade, the Minneapolis Grain Exchange, and the MidAmerica Commodity Exchange in Chicago.

World Production of Wheat In Thousands of Metric Tons

Crop Year	Argentina	Australia	Canada	China	France	W. Germany	India	Italy	Pakistan	Spain	Turkey	Un. Kingdom	U.S.S.R.	United States	World Total[1]
1969–0	7,020	10,546	18,623	23,000	14,459	5,820	18,652	9,585	6,711	4,624	8,300	3,364	62,300	39,263	287,739
1970–1	4,250	7,890	9,023	24,500	12,922	5,492	20,093	9,689	7,399	4,060	8,000	4,236	82,700	36,783	291,108
1971–2	5,680	8,651	14,412	24,000	15,360	7,142	23,832	10,070	6,476	5,457	10,700	4,815	98,760	44,029	322,562
1972–3	6,800	6,510	14,514	26,000	18,123	6,410	26,410	9,423	6,889	4,562	9,500	4,761	85,993	42,046	331,056
1973–4	6,560	12,094	16,459	28,000	17,792	7,134	24,735	8,900	7,800	3,915	8,000	5,003	109,784	46,407	371,600
1974–5	5,970	11,357	13,295	37,000	19,142	7,761	22,072	9,697	7,800	4,534	8,300	6,130	83,849	48,797	356,410
1975–6	8,570	12,024	17,078	40,000	15,013	7,014	24,104	9,610	7,673	4,302	11,500	4,488	66,224	58,078	350,057
1976–7	11,000	11,700	23,587	50,500	16,150	6,702	28,846	9,528	8,691	4,436	13,000	4,740	96,882	58,500	421,200
1977–8	5,700	9,400	19,900	41,000	17,046	7,126	29,082	6,650	9,100	3,988	13,500	5,267	92,200	55,700	384,200
1978–9	8,100	18,100	21,100	53,800	21,056	8,118	31,700	9,191	8,400	4,795	13,300	6,615	120,800	48,300	446,600
1979–0	8,100	16,200	17,200	62,700	18,695	7,970	35,500	8,800	9,900	4,191	13,000	6,800	90,200	58,080	422,800
1980–1[2]	7,800	10,900	19,100	54,200			31,800		10,800		13,000		98,200	64,618	439,400
1981–2[1]	7,800	16,400	24,500	57,500			36,500		11,400		13,200		88,000	76,025	452,300
1982–3															

[1] Estimated. [2] Preliminary. *Source: Foreign Agricultural Service, U.S.D.A.*

Wheat Supply and Distribution in Canada, Australia and Argentina In Millions of Metric Tons[4]

Crop Year	Canada (Yr. Beg. Aug. 1)					Australia (Yr. Beg. Dec. 1)					Argentina (Yr. Beg. Dec. 1)				
	Supply			Disappearance		Supply			Disappearance		Supply			Disappearance	
	Stocks Aug. 1	New Crop	Total Supply	Domestic	Exports[1]	Stocks Dec. 1	New Crop	Total Supply	Domestic	Exports[1]	Stocks Dec. 1	New Crop	Total Supply	Domestic	Exports[1]
1969–0	852	684	1,536	180	347	267	388	655	88	297	28	258	286	147	84
1970–1	1,008	332	1,340	171	435	277	290	567	96	336	29	181	210	149	36
1971–2[4]	20.0	14.4	34.4	4.8	13.7	3.7	8.6	12.3	2.9	7.8	.7	5.7	6.4	4.4	1.6
1972–3	15.9	14.5	30.4	4.8	15.7	1.6	6.6	8.2	3.3	4.3	.4	6.9	7.3	4.3	3.2
1973–4	9.9	16.2	26.1	4.6	11.4	.6	12.0	12.6	3.5	7.0	.3	6.6	6.9	4.2	1.6
1974–5	10.1	13.3	23.4	4.6	1.07	2.0	11.4	13.4	3.1	8.6	1.0	6.0	7.0	4.5	1.8
1975–6	8.0	17.1	25.1	4.6	12.3	1.7	12.0	13.7	2.3	8.7	.7	8.6	9.3	5.4	3.2
1976–7	8.2	23.6	31.8	5.0	13.4	2.7	11.7	14.4	2.8	9.5	.7	11.0	11.7	4.2	5.9
1977–8	13.3	19.9	33.2	5.1	16.0	2.1	9.4	11.5	2.2	8.4	1.6	5.7	7.3	4.3	1.8
1978–9	12.1	21.1	33.2	5.3	13.5	.8	18.1	18.9	2.6	6.7	1.2	8.1	9.3	4.1	3.3
1979–0	14.9	17.2	32.1	5.5	15.0	4.6	16.2	20.8	3.3	14.9	1.1	8.1	9.2	4.0	4.7
1980–1[2]	10.7	19.2	29.9	5.3	17.0	4.4	10.9	15.3	3.4	10.6	.4	7.8	8.2	3.9	3.9
1981–2[3]	8.3	24.5	32.8	5.2	17.5	2.4	16.4	18.8	3.4	12.0	.4	7.8	8.2	4.0	3.8
1982–3	10.6					2.6					.4				

[1] Including flour. [2] Preliminary. [3] Forecast. [4] Data prior to 1971–72 are in MILLIONS OF BUSHELS.
Source: Foreign Agricultural Service, U.S.D.A.

Seeded Acreage, Yield and Production of All Wheat in the United States

Year	Seeded Acreage—1,000,000 Acres					Yield Per Harvested Acre—In Bushels					Production—1,000,000 Bushels				
	Winter	Spring	Not Durum	Durum	All	Winter	Spring	Not Durum	Durum	All	Winter	Spring	Not Durum	Durum	All
1969	42.3	11.1	7.6	3.5	53.5	31.2	28.7	27.3	31.7	30.6	1,131.4	311.2	202.8	108.4	1,442.7
1970	37.6	11.1	8.9	2.2	48.7	33.4	23.9	23.6	25.1	31.0	1,091.7	259.8	207.0	52.8	1,351.6
1971	38.1	15.8	12.8	2.9	53.8	35.4	30.9	30.7	32.1	33.9	1,145.0	473.6	381.8	91.8	1,618.6
1972	42.2	12.7	10.1	2.6	54.9	34.0	28.9	29.0	28.6	32.7	1,186.5	359.7	286.8	72.9	1,546.2
1973	43.5	15.8	12.8	3.0	59.3	33.0	28.1	28.3	27.2	31.6	1,278.2	432.6	354.1	78.5	1,710.8
1974	52.0	19.0	14.8	4.2	71.0	29.4	21.9	22.4	19.8	27.3	1,375.5	406.4	325.1	81.2	1,781.9
1975	56.0	18.9	14.1	4.8	74.8	32.0	26.7	26.8	26.4	30.6	1,642.9	484.1	360.7	123.4	2,126.9
1976	57.8	22.5	17.8	4.7	80.4	31.5	27.3	26.8	29.4	30.3	1,564.1	584.6	449.7	134.9	2,148.8
1977	56.5	18.8	15.8	3.2	75.4	31.6	28.0	28.4	26.4	30.7	1,540.4	505.1	425.1	80.0	2,045.5
1978	47.5	18.4	14.3	4.1	66.0	31.8	29.7	30.0	33.1	31.4	1,222.4	553.1	419.8	133.3	1,775.5
1979	51.8	19.6	15.6	4.0	71.4	36.9		28.2	27.1	34.2	1,601.2	532.9	426.2	106.7	2,134.1
1980[1]	57.6	23.0	17.5	5.5	80.6	36.8		25.3	22.4	33.4	1,895.4	478.9	370.5	108.4	2,374.3
1981[2]	65.9	23.1	17.1	5.9	88.9	35.8		30.6	32.3	34.5	2,098.7	693.7	508.8	185.9	2,793.4
1982[2]	66.3														

[1] Preliminary. [2] Estimate. *Source: Crop Reporting Board, U.S.D.A.*

WHEAT AND FLOUR

Stocks, Production, and Exports of Wheat, by Classes In Millions of Bushels

Year Beginning June[5]	Hard Spring			Durum[3]			Hard Winter			Soft Red Winter			White		
	June 1[6] Stocks	Production	Exports[2]	June 1[6] Stocks	Production	Exports[2]	June 1[6] Stocks	Production	Exports[2]	June 1[6] Stocks	Production	Exports[2]	June 1[6] Stocks	Production	Exports[2]
1969–0	210	190	89	41	108	34	475	785	336	33	186	28	58	174	119
1970–1	178	198	113	80	53	39	574	755	450	23	174	26	30	171	110
1971–2	146	366	104	58	92	44	492	747	337	15	212	43	20	201	104
1972–3	275	276	198	69	73	65	471	761	704	18	226	68	30	209	151
1973–4	212	328	245	45	79	45	287	957	775	25	159	27	30	182	125
1974–5	87	293	130	33	81	47	170	883	510	23	273	136	27	252	195
1975–6	104	327	160	26	123	52	225	1,058	581	37	326	165	43	288	215
1976–7	116	411	124	53	135	41	379	976	418	57	336	181	60	284	186
1977–8	250	399	156	92	80	62	606	997	535	72	349	197	93	221	174
1978–9	335	380	232	67	133	72	632	830	610	71	189	95	73	244	185
1979–0	320	363	217	86	106	83	423	1,089	725	27	317	154	68	259	196
1980–1[1]	285	312	188	61	108	59	440	1,181	697	40	435	299	76	338	267
1981–2[4]	257	468	215	60	186	80	551	1,115	850	38	673	425	93	351	280
1982–3[4]	335			112			440			70			105		

[1] Preliminary. [2] Includes flour made from U.S. wheat & shipments to territories [3] Includes "Red Durum." [4] Estimate. [5] Data prior to 1973–4 are for YEAR BEGINNING JULY. [6] Data prior to 1973–4 are as of JULY 1.

Source: Economic Research Service, U.S.D.A.

Salient Statistics of Wheat in the United States

Crop Year	Acreage Harvested (1,000 Acres)			Avg.—All Yield Per Acre In Bushels	Farm Disposition (Million Bushels)			Value of Production Ths. $	Foreign Trade[5] (Million Bushels)		Export Value of U.S. Wheat & Pdt's. Mil. $	Per Capita[1] Consumption (In Pounds)	
	Winter	Spring	All		Used for Seed	Fed to Livestock	Sold		Domestic Exports[3]	Imports[3]		Flour	Cereal
1969–0	36,303	10,843	47,146	30.6	33.3	58.5	1,351	1,795,738	581.6	2.8	924	113	2.9
1970–1	32,702	10,862	43,564	31.0	35.4	59.9	1,256	1,803,241	693.8	1.5	965	111	2.9
1971–2	32,370	15,315	47,685	33.9	37.3	71.8	1,510	2,167,797	590.2	1.1	1,225	111	2.9
1972–3	34,859	12,444	47,303	32.7	38.0	47.0	1,461	2,706,121	1,127.5	1.3	1,071	110	2.9
1973–4	38,747	15,401	54,148	31.6	48.4	28.1	1,634	6,744,631	1,106.7	2.6	2,387	114	2.9
1974–5	46,778	18,590	65,368	27.3	— 87.5—		1,695	7,287,261	1,018	3.4	4,738	112	2.9
1975–6	51,376	18,084	69,391	30.6	— 94.8—		2,032	7,549,829	1,173	2.4	5,001	116	2.9
1976–7	49,578	21,311	70,771	30.3	—104.8—		2,044	5,867,836	950	2.7	4,976	120	2.9
1977–8	48,772	17,797	66,461	30.7	—117.4—		1,928	4,764,557	1,124	1.9	3,054	117	2.9
1978–9	38,491	18,004	56,495	31.4	— 83.2—		1,692	5,280,634	1,194	1.9	4,139	117	2.9
1979–0[4]	43,427	19,027	62,454	34.2	— 87.6—		2,046	8,070,378	1,375	2.1	4,862	120	2.9
1980–1[4]	51,494	19,490	70,984	33.4	—104.2—		2,266	9,277,608	1,510	2.5		120	2.9
1981–2[4]	58,589	22,359	80,948	34.5				10,225,881	1,850	2.0			
1982–3													

[1] Civilian only. [2] Includes flour milled from imported wheat. [3] Total wheat, flour & other products. [4] Preliminary. [5] Year beginning June. *Source: Economic Research Service, U.S.D.A.*

Wheat Under Price Support Through the End of the Month (Cumulative Total from Current Season's Crop) In Millions of Bushels

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total
1969–0	124.4	221.3	297.1	336.3	347.0	353.2	384.5	391.1	397.2	402.8	405.8	406.9	411.0
1970–1	126.4	160.3	193.8	213.0	221.0	226.4	240.9	244.3	247.8	251.5	253.7	254.2	254.2
1971–2	77.2	134.3	252.2	318.2	342.5	359.3	408.9	420.1	427.9	434.3	437.4	438.0	438.1
1972–3	59.4	78.3	103.7	121.9	130.3	135.1	140.5	141.8	142.6	142.9	143.0	143.0	143.0
1973–4	32.2	42.2	50.9	55.0	58.1	59.7	59.9	59.9	59.9	59.9	59.9	59.9	59.9
1974–5	14.2	22.2	28.8	31.3	31.8	33.8	35.6	36.1	36.3	36.4	36.4	36.5	36.5
1975–6	12.5	16.4	18.8	23.8	26.4	39.3	45.8	46.8	47.4	47.8	47.8	47.8	47.8
1976–7	8.3	22.0	44.0	82.2	148.1	226.1	278.7	300.7	341.5	363.1	424.7	468.3	468.3
1977–8	186.9	327.2	406.7	438.7	462.8	478.7	509.2	523.6	556.4	572.6	579.5	582.1	582.1
1978–9	53.0	105.7	154.6	183.1	202.5	213.4	237.5	242.8	251.0	254.0	254.3	255.0	255.0
1979–0	6.5	30.1	55.6	82.8	103.3	115.5	138.2	145.4	161.0	176.4	179.4	180.5	180.5
1980–1	35.7	56.6	99.2	126.5	142.2	183.3	228.6	261.0	297.4	328.0	328.0	329.4	329.4
1981–2	84.6		254.8	296.1	314.1	344.7	392.3	411.7	427.4	443.3			
1982–3													

Source: Economic Research Service, U.S.D.A.

U.S. Wheat Foreign Trade and Domestic Disappearance In Millions of Bushels

Year Begin. June	Imports (Grain Only)					Exports (Grain Only)					Domestic Disappearance				
	June Sept.	Oct.-Dec.	Jan.-Mar.	Apr.-May	Total	June Sept.	Oct.-Dec.	Jan.-Mar.	Apr.-May	Total	June Sept.	Oct.-Dec.	Jan.-Mar.	Apr.-May	Total
1969–0	.3	1.1	.7	.7	2.8	175.5	149.1	168.1	110.3	603.0	299.1	191.6	168.2	105.0	763.9
1970–1	.7	.2	.3	.3	1.5	222	212	180	128	741	324	167	170	110	772
1971–2	.4	.2	.3	.2	1.0	216	130	147	117	610	352	196	190	111	849
1972–3	.4	.3	.4	.2	1.3	289	288	310	248	1,135	370	184	162	82	798
1973–4	.5	.3	.3	1.5	2.6	526	341	232	119	1,217	331	183	149	91	754
1974–5	2.1	.6	.4	.2	3.3	330	283	255	150	1,019	232	172	191	78	672
1975–6	.7	.7	.3	.6	2.4	428	344	247	154	1,173	245	156	202	119	722
1976–7	.9	.4	.3	1.1	2.7	399	220	179	152	950	226	187	214	127	754
1977–8	.8	.4	.4	.3	1.9	382	225	279	238	1,124	373	183	189	114	859
1978–9	.6	.5	.5	.3	1.9	493	309	225	168	1,194	327	195	177	138	837
1979–0	.7	.5	.5	.4	2.1	511	388	283	194	1,375	277	167	209	130	783
1980–1[1]	.8	.6	.7	.4	2.5	518	371	400	220	1,510	286	198	175	120	780
1981–2[1]	.7	.8	.7			622	428	441			427	131	181		
1982–3															

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

Wheat Stocks in the United States In Millions of Bushels

Year	On Farms				Off Farms				Total Stocks			
	Jan. 1	Apr. 1	June 1[2]	Oct. 1	Jan. 1	Apr. 1	June 1[2]	Oct. 1	Jan. 1	Apr. 1	June 1[2]	Oct. 1
1969	576.9	460.5	325.9	752.2	764.4	649.0	490.8	1,120.2	1,341.4	1,109.5	816.7	1,872.4
1970	609.4	456.5	307.1	663.7	923.4	740.7	577.8	1,124.8	1,532.8	1,197.2	884.9	1,788.5
1971	526.1	381.1	240.3	826.9	883.9	679.4	491.2	1,046.9	1,410.0	1,060.4	731.5	1,873.8
1972	694.5	525.7	355.1	730.2	853.1	685.0	508.2	1,140.7	1,547.6	1,210.7	863.3	1,870.9
1973	510.2	316.1	133.9	608.5	888.8	611.3	304.6	843.1	1,399.0	927.3	438.5	1,451.6
1974	364.4	181.7	89.5	680.5	564.0	366.4	158.2	881.7	928.3	548.1	247.7	1,562.1
1975	446.3	274.1	132.7	755.5	661.2	388.0	194.3	1,129.0	1,107.5	662.1	327.0	1,884.5
1976	547.6	342.6	235.5	833.3	838.0	594.2	429.8	1,354.9	1,385.7	936.8	665.3	2,188.2
1977	665.4	511.0	426.3	1,035.1	1,116.4	878.5	685.9	1,365.3	1,781.8	1,389.5	1,112.2	2,400.4
1978	831.3	639.9	492.9	1,033.7	1,162.5	887.8	683.8	1,104.2	1,993.8	1,527.7	1,176.7	2,137.9
1979	814.4	633.3	484.3	1,030.1	816.4	596.2	439.8	1,240.7	1,630.8	1,229.4	924.1	2,270.8
1980	773.9	569.6	376.5	974.7	942.2	655.5	525.5	1,497.6	1,716.2	1,225.1	902.0	2,472.3
1981[1]	753.4	538.9	414.3	1,204.9	1,149.7	789.8	574.5	1,529.0	1,903.2	1,328.6	988.8	2,733.9
1982[1]	954.8	748.0			1,221.2	809.9			2,176.0	1,554.9		
1983												

[1] Preliminary. [2] Data prior to 1976 are *as of July 1*. *Source: Crop Reporting Board, U.S.D.A.*

United States Wheat and Wheat Flour Imports and Exports In Thousands of Bushels

Year Beginning June	Imports					Exports						
	Wheat					Public Law 480						
	Suitable for Milling	Unfit for Human Consumption	Flour	Other Pdt's.[2]	Total	Sales for Foreign Currency[3]	Long-Term $ & Conver. for Cur. Credit Sales	Gov't. to Gov't. Donations[4]	Donations Thru Voluntary Relief Agencies	Barter for Strategic Materials	Mutual Security (A.I.D.)[5]	Total Specified Gov't. Programs
			(Wheat Equivalent)									
1969–70	794	1,417	55	567	2,833	69,447	154,697	33,668	11,430	—	—	269,242
1970–71	397	265	90	723	1,475	46,970	143,267	30,477	11,381	—	966	233,061
1971–72	101	82	89	781	1,053	22,686	153,382	37,858	13,006	—	754	227,686
1972–73	29	52	90	1,131	1,302	—	90,576	35,954	12,603	—	−86	139,047
1973–74	1,262	70	178	1,113	2,623	—	26,355	10,891	8,502	—	11,074	56,822
1974–75	1,734	109	387	1,134	3,364	—	102,269	6,705	7,873	—	—	116,847
1975–76	631	344	92	1,307	2,374	—	105,861	2,734	7,046	—	8,348	123,989
1976–77	1,298	20	32	1,381	2,731	—	133,504	8,887	17,842	—	15,836	158,277
1977–78	424	2	20	1,475	1,921	—	127,137	6,851	12,983	—	13,808	160,779
1978–79	18	15	45	1,772	1,850	—	133,505	6,714	11,174	—	243	151,636
1979–80[1]	155	50	62	1,869	2,136	—	112,898	5,545	4,776	—	2,574	125,792
1980–81[1]					2,000							

[1] Preliminary. [2] Includes macaroni, semolina & similar pdt's. [3] Authorized by title I, P.L. 480. [4] Author. by title II, P.L. 480. [5] Foreign Assist. Act of 1961. *Source: Economic Research Service, U.S.D.A.*

WHEAT AND FLOUR

Comparative Average Cash Wheat Prices In Dollars per Bushel

												Export Prices ($ per Metric Ton)	
						Minneapolis							
Crop Year—June to May[3]	Received by U.S. Farmers	No. 2 Soft Red Winter Chicago	No. 1 Hard Red Ordin. Prot. Kansas City	No. 2 Soft Red Winter St. Louis	No. 1 Hard Winter Denver	No. 1 Dark Northern Spring	No. 2 Hard Amber Durum	No. 1 Soft Portland Oregon	No. 2 Western White Pacific N.W.	No. 2 White Soft Toledo	Gulf No. 1 H.R. Winter Ports	Portland No. 2 White West. Duluth
1972–3	1.76	2.23	2.33	2.24	1.92	2.21	2.17	2.47	2.48	2.28		
1973–4	3.95	4.93	4.51	4.61	4.00	4.73	6.76	4.81	4.81	4.80	4.85	
1974–5	4.09	4.09	4.20	4.03	3.76	4.96	6.44	4.37	4.55	3.89	4.46	5.05
1975–6[3]	3.56	3.54	3.74	3.46	3.33	3.74	5.16	3.88	3.95	3.36	4.05	4.47
1976–7	2.73	2.81	2.88	2.78	2.38	2.96	3.30	3.10	3.16	2.75	115	116
1977–8	2.33	2.56	2.72	2.54	2.16	2.66	3.37	3.09	3.15	2.48	110	116
1978–9	2.97	3.57	3.38	3.43	2.77	3.17	3.66	3.73	3.80	3.54	135	140
1979–0[1]	3.78	4.24	4.25	4.10	3.54	4.16	5.09	4.22	4.38	4.06	171	161
1980–1[1]	3.91	4.33	4.45	4.39		4.46	6.81	4.36		4.07	178	166

[1] Preliminary. [2] Estimate. [3] Data prior to 1975–6 are for crop year July to June. *Source: Economic Research Service, U.S.D.A.*

Production of Winter Wheat in the United States In Millions of Bushels

Year	Colorado	Idaho	Illinois	Indiana	Kansas	Michigan	Missouri	Montana	Nebraska	Ohio	Oklahoma	Oregon	Pa.	Texas	Wash.	Total U.S.
1972	51.6	34.7	54.0	39.6	314.9	21.4	36.1	48.3	92.8	46.3	89.7	35.2	8.6	44.0	119.5	1,186.5
1973	63.2	32.8	39.0	24.6	384.8	19.9	25.5	55.1	93.8	25.6	157.8	33.6	7.4	98.6	74.2	1,278.2
1974	71.9	39.8	51.9	46.9	319.0	34.0	38.0	78.2	98.6	59.5	134.4	47.3	11.5	52.8	110.4	1,375.5
1975	55.6	36.1	67.5	61.6	350.9	34.2	48.5	105.0	98.2	70.6	160.8	54.1	10.1	131.1	137.0	1,642.9
1976	51.6	39.2	72.2	54.0	339.0	33.1	58.1	98.6	94.4	64.0	151.2	56.1	9.0	103.4	132.7	1,564.1
1977	56.1	32.4	67.5	55.8	344.9	33.0	68.6	81.2	103.3	72.4	175.5	45.2	8.9	117.5	95.2	1,540.4
1978	57.3	41.8	33.4	28.9	300.0	16.4	28.6	83.7	81.6	42.1	145.8	47.3	7.1	54.0	117.0	1,222.4
1979	67.6	35.7	53.8	44.4	410.4	31.6	70.4	57.4	86.7	63.4	216.6	48.0	7.3	138.0	94.6	1,601.2
1980	107.2	51.9	75.4	53.9	420.0	35.2	89.0	54.8	108.3	67.1	195.0	72.0	9.3	130.0	143.0	1,895.4
1981[1]	83.9	55.7	92.5	62.1	305.0	41.5	115.5	89.3	106.2	72.6	172.8	73.2	9.7	183.4	161.3	2,098.7

[1] Preliminary, December estimate. *Source: Crop Reporting Board, U.S.D.A.*

Production of All Spring Wheat in the United States In Millions of Bushels

	Durum Wheat						Other Spring Wheat									
Year	Arizona	Minnesota	Montana	North Dakota	South Dakota	Total Durum	Colorado	Idaho	Minnesota	Montana	North Dakota	Oregon	South Dakota	Utah	Washington	Total U.S.
1973		2.1	4.0	69.6	2.7	78.5	.5	15.6	74.9	37.6	169.7	2.4	36.1	1.4	15.0	354.1
1974		2.4	5.1	70.8	2.9	81.2	.7	22.1	77.4	36.9	136.5	5.4	29.9	1.7	13.2	325.1
1975		2.8	10.1	104.9	4.4	123.4	.7	24.0	83.7	40.8	156.3	4.0	35.1	1.5	10.9	360.7
1976	23.9	2.7	8.6	90.5	1.6	134.9	1.6	29.2	123.5	60.2	193.6	4.2	20.5	1.3	11.3	449.7
1977	6.1	2.8	4.8	60.5	3.3	80.0	1.1	18.4	125.6	44.9	167.0	2.4	51.7	.6	6.1	425.1
1978	6.4	3.8	8.7	102.1	3.8	133.3	2.0	33.6	87.8	53.7	180.1	4.6	44.0	1.4	11.2	419.8
1979	5.3	2.8	6.8	84.5	3.6	106.7	2.6	38.4	85.8	52.3	165.1	9.3	46.0	1.6	23.4	426.2
1980	12.4	3.4	7.6	73.2	4.1	108.4	3.1	44.2	96.9	57.4	105.5	5.4	37.4	1.4	17.2	370.5
1981[1]	18.3	5.4	11.0	130.8	5.8	185.9	3.5	34.1	134.0	72.5	197.4	4.2	52.8	1.4	7.0	508.8

[1] Preliminary, December estimate. *Source: Crop Reporting Board, U.S.D.A.*

United States Official Winter Wheat Crop Production Reports In Thousands of Bushels

Crop Year	Previous December	April 1	May 1	June 1	July 1	August 1	Sept. 1	Current December	Final
1973	1,277,848	—	1,281,999	1,315,672	1,319,702	1,293,053	1,291,463	1,269,653	1,278,220
1974–5	1,513,462	—	1,612,106	1,531,355	1,402,445	1,393,460	1,390,800	1,391,303	1,375,526
1975–6	1,599,527	—	1,619,776	1,618,598	1,636,524	1,634,227	1,650,037	1,651,209	1,642,900
1976–7	1,495,869	—	1,458,996	—	1,530,124	1,542,660	1,542,330	1,566,074	1,564,118
1977–8	1,438,015	—	1,477,455	—	1,539,029	1,526,029	1,528,844	1,526,713	1,540,419
1978–9	1,321,068	—	1,284,375	—	1,801,705	1,248,405	1,243,685	1,248,272	1,222,446
1979–0	1,441,306	—	1,390,848	—	1,560,768	1,602,901	1,595,591	1,608,897	1,601,234
1980–1	1,567,817	—	1,711,010	1,757,170	2,317,068	2,234,951	2,353,641	1,891,251	1,895,383
1981–2	1,977,079	—	2,078,137	—	2,092,692	2,064,845	2,059,205	2,098,719	
1982–3	2,128,133	—	2,063,336						

Source: Crop Reporting Board, U.S.D.A.

Supply and Distribution of Wheat in the United States In Millions of Bushels

Crop Yr. Beginning June	Supply							Domestic Disappearance							
	Stocks, June 1										Feed				
	On Farms	Mills, Elevators[3]	C.C.C.	Total Stocks	Production	Imports[4]	Total Supply	Food	Seed	Industry	Residual[5]	(On Farms Where Grown)	Total Dom. Disap.	Exports[4]	Total Disappearance
1969–0	325.9	490.0	.8	904.0	1,442.7	2.8	2,350	520.1	55.6	.5	187.7	(61.0)	763.9	603.0	1,367
1970–1	307.1	576.6	1.2	982.6	1,351.5	1.5	2,336	517.2	62.1	.1	192.6	(62.0)	772.0	740.8	1,513
1971–2	240.3	489.4	1.8	822.8	1,618.6	1.1	2,442	523.7	63.2	.1	262.3	(71.7)	849.3	609.7	1,459
1972–3	355.1	506.3	1.8	983.4	1,546.2	1.3	2,531	531.8	67.4	.1	199.5	(47.0)	798.8	1,135.0	1,934
1973–4	133.9	302.8	1.8	597.1	1,710.8	2.6	2,311	544.3	84.1	—	125.1	(31.5)	753.5	1,217.0	1,971
1974–5	89.5	157.9	.3	340.1	1,781.9	3.4	2,125	545.0	92.0	—	34.9		671.9	1,018.5	1,690
1975–6	132.7	194.3	—	435.0	2,126.9	2.4	2,564	588.6	99.0	.1	38.1		725.8	1,172.9	1,859
1976–7	235.5	429.8	—	665.6	2,148.8	2.7	2,817	588.0	92.0	.1	74.3		754.4	949.5	1,704
1977–8	426.3	685.9	—	1,113.2	2,045.5	1.9	3,161	586.5	80.0	.1	192.5		859.0	1,123.9	1,983
1978–9	492.9	683.8	—	1,176.7	1,775.5	1.9	2,955	592.4	87.0	.1	157.6		837.0	1,194.1	2,031
1979–0	484.3	439.8	—	924.1	2,134.1	2.1	3,060	596.1	101.0	—	86.0		783.1	1,375.2	2,158
1980–1[1]	376.5	525.5	—	902.0	2,374.3	2.5	3,278	614.0	114.0	—	51.9		779.9	1,510.1	2,290
1981–2[2]	414.3	574.5	—	988.8	2,793.4	2.0	3,784	625.0	112.0	—	135.0		872.0	1,850.0	2,722
1982–3															

[1] Preliminary. [2] Estimated. [3] Also warehouses and all off-farm storage not otherwise designated, including flour mills. [4] Imports & exports are for wheat, including flour & other products in terms of wheat. [5] Approximate feed use. *Source: Economic Research Service, U.S.D.A.*

Exports of Wheat (Only) from the United States In Millions of Bushels

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total
1969–0	41.8	32.4	32.9	40.5	38.4	48.1	51.7	51.4	44.6	54.4	43.4	48.3	527.9
1970–1	47.9	56.3	49.9	69.0	60.3	61.6	59.3	46.7	59.9	50.7	66.7	43.4	671.7
1971–2	47.4	38.3	59.4	31.7	39.5	45.2	36.5	45.6	49.8	47.3	59.6	66.9	567.2
1972–3	58.8	68.1	69.0	82.6	83.5	107.3	101.9	92.9	98.7	108.3	128.8	126.1	1,127.0
1973–4	115.2	149.1	131.6	122.1	120.5	89.5	83.1	72.8	63.9	55.7	55.0	56.9	1,115.4
1974–5	82.8	91.6	86.0	91.3	98.3	82.3	108.4	71.3	65.2	77.0	65.3	77.2	996.7
1975–6	99.7	111.2	125.5	123.6	117.8	92.3	91.6	72.4	76.4	76.8	67.8	66.7	1,121.8
1976–7	85.4	113.0	109.9	98.7	53.3	56.9	49.0	57.7	50.7	68.1	66.4	75.6	884.7
1977–8	82.8	93.4	108.5	68.3	56.7	86.7	64.6	94.5	103.3	101.8	118.8	108.8	1,088.2
1978–9	106.1	131.9	118.3	113.0	92.3	90.0	70.4	67.1	75.5	77.0	76.8	102.2	1,120.6
1979–0	133.3	117.8	129.6	149.0	108.9	114.9	82.7	89.5	94.7	93.3	88.6	96.2	1,305.5
1980–1	123.6	139.6	136.0	116.2	112.2	131.9	129.9	124.4	128.8	127.7	76.0	124.5	1,470.8
1981–2	138.1	145.4	194.1	156.9	127.5	137.4	124.2						
1982–3													

Source: Department of Commerce

Average Price of No. 1 Hard Winter (Ordinary Protein) Wheat, at Kansas City In Cents per Bushel

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Average
1969–0	128	131	139	143	146	146	146	146	145	147	144	140	142
1970–1	138	147	159	158	159	159	158	158	155	156	161	163	156
1971–2	154	154	153	156	156	158	158	157	158	161	162	152	157
1972–3	158	182	210	215	225	262	267	248	242	251	263	269	233
1973–4	290	467	501	467	478	522	568	582	501	407	359	405	462
1974–5	436	433	435	494	488	466	415	393	369	366	334	323	413
1975–6	361	412	421	409	371	350	357	381	381	361	357	375	374
1976–7	363	321	301	277	262	264	270	273	263	252	236	231	288
1977–8	235	231	247	256	281	280	282	284	307	321	312	312	272
1978–9	314	314	324	342	348	339	342	350	352	353	364	417	338
1979–0	434	412	426	439	453	451	433	432	407	390	410	407	425
1980–1	421	431	445	470	489	454	460	447	435	448	436	424	445
1981–2	425	414	419	431	446	435	433	426	425				
1982–3													

Source: Agricultural Marketing Service, U.S.D.A.

WHEAT AND FLOUR

United States Wheat Quarterly Supply and Disappearance In Millions of Bushels

Year & Begin. June 1	Supply				Disappearance							Ending Stocks		
					Domestic Use									
	Beginning Stocks	Production	Imports[2]	Total Supply	Food	Alc. Beverages	Seed	Feed[3]	Total	Exports[2]	Total Disappearance	Gov't. Owned[4]	Privately Owned[5]	Total Stocks
1975–6	435	2,123	2.4	2,560	587.5	.1	99.0	35.1	721.7	1,173	1,895	—	665.3	665.3
June–Sept.	435	2,123	.7	2,558	195.0	6	33.0	17.2	245.2	428.4	673.6	—	1,885	1,885
Oct.–Dec.	1,885	—	.7	1,885	149.9	6	35.0	–28.8	156.1	343.6	499.6	—	1,386	1,386
Jan.–Mar.	1,386	—	.3	1,386	148.5	6	1.0	52.4	201.9	247.3	449.2	—	936.8	936.8
Apr.–May	937	—	.6	937	94.2	6	30.0	–5.7	118.5	153.7	272.1	—	665.3	665.3
1976–7	666	2,149	2.7	2,817	588.0	.1	92.0	74.3	754.4	949.5	1,704	—	1,113	1,113
June–Sept.	665	2,149	.9	2,815	200.4	6	32.0	–6.3	226.1	398.8	624.9	—	2,190	2,190
Oct.–Dec.	2,190	—	.4	2,191	152.5	6	34.0	.4	186.9	220.3	407.2	—	1,784	1,784
Jan.–Mar.	1,784	—	.3	1,784	147.3	6	1.0	65.9	214.2	178.8	393.0	—	1,391	1,391
Apr.–May	1,391	—	1.1	1,392	87.8	6	25.0	14.3	127.2	151.6	278.8	—	1,113	1,113
1977–8	1,113	2,046	1.9	3,161	586.5	.1	80.0	192.5	859.0	1,124	1,983	45.7	1,132	1,178
June–Sept.	1,113	2,046	.8	3,160	193.3	6	32.0	148.1	373.4	381.7	775.1	8.2	2,396	2,405
Oct.–Dec.	2,405	—	.4	2,405	153.5	6	23.0	6.0	182.5	225.4	407.9	31.8	1,965	1,997
Jan.–Mar.	1,997	—	.4	1,997	145.5	6	1.0	42.4	188.9	278.6	467.5	44.8	1,485	1,530
Apr.–May	1,530	—	.3	1,530	94.2	6	24.0	—4.0	114.2	238.2	352.4	45.7	1,132	1,178
1978–9	1,178	1,776	1.9	2,955	592.4	.1	87.0	157.6	837.0	1,194	2,031	50.2	873.9	924.1
June–Sept.	1,178	1,776	.6	2,954	191.7	6	27.0	108.0	326.7	493.3	820.0	48.9	2,085	2,134
Oct.–Dec.	2,134	—	.5	2,134	153.8	6	34.0	7.0	194.8	308.8	503.6	49.5	1,581	1,631
Jan.–Mar.	1,631	—	.5	1,631	147.8	6	1.0	28.6	177.4	224.5	401.9	49.5	1,180	1,229
Apr.–May	1,229	—	.3	1,230	99.1	.1	25.0	14.0	138.1	167.5	305.6	50.2	873.9	924.1
1979–0	924.1	2,134	2.1	3,060	596.1	—	101.0	86.0	783.1	1,375	2,158	141.7	760.3	902.0
June–Sept.	824.1	2,134	.7	3,059	198.5	6	33.0	45.6	277.1	511.0	788.1	49.9	2,221	2,271
Oct.–Dec.	2,271	—	.5	2,271	157.9	6	37.0	—27.7	167.2	387.9	555.1	49.6	1,667	1,716
Jan.–Mar.	1,716	—	.5	1,717	145.1	6	1.0	62.8	208.9	282.7	491.6	63.3	1,162	1,225
Apr.–May	1,225		.4	1,226	94.6	.1	30.0	5.3	129.9	193.6	323.5	141.7	760.3	902.0
1980–1[1]	902.0	2,374	2.5	3,279	614.0	—	114.0	51.9	779.9	1,510	2,290	199.7	789.1	988.8
June–Sep.	902.0	2,374	.8	3,277	197.2	6	38.0	51.2	286.4	518.4	804.8	202.1	2,270	2,472
Oct.–Dec.	2,472	—	.6	2,473	167.0	6	44.0	—12.7	198.4	371.4	569.7	203.5	1,700	1,903
Jan.–Mar.	1,903	—	.7	1,904	153.7	5	1.0	20.1	174.8	400.4	575.3	203.2	1,125	1,329
Apr.–May	1,329	—	.4	1,329	96.1	6	31.0	—6.7	120.3	219.9	340.2	199.7	789.1	902.0
1981–2[7]	902.0	2,793	2.0	3,784	625.0	6	112.0	135.0	872.0	1,850	2,722			1,062
June–Sept.	988.8	2,793	.7	3,783	202.5	6	37.0	187.7	427.2	621.8	1,049.0	191.3	2,543	2,734
Oct.–Dec.	2,734	—	.8	2,735	158.6	6	46.0	—73.4	131.2	427.5	558.7	188.7	1,987	2,176
Jan.–Mar.	2,176	—	.7	2,177	151.7	6	1.0	28.1	180.8	441.0	621.8	189.1	1,366	1,555
Apr.–May	1,555													

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[1] Preliminary. [2] Imports & exports include flour and other products expressed in wheat equivalent. [3] Residual. [4] Uncommitted, Gov't. only. [5] Includes total loans. [6] Less than 50,000 bushels. [7] Projected.
Source: Economics Research Service, U.S.D.A.

Wheat Government Loan Program Data in the United States Loan Rates (Cents Per Bushel)

Crop Year Beginning June	Total Support Rate	National Avg.[1]	Target Rate	No. 1 Dk. No. Spring Minneapolis	No. 1 Hard Red Winter Kansas City	No. 1 Soft White Portland	Placed Under Loan	Direct Purchases	Total	Delivered to CCC	Total Stocks Ending May 31					
													Privately Owned			
													Under Loan			
											Ending Carryover	CCC Uncommitted	Current Crop	Previous	Sealed Under Bond	Other
							Millions of Bushels									
1970–1	200	125	75	159	147	146	254.2	—	254.2	5.2	822.8	352.6	47.6	191.7	8	222.9
1971–2	179	125	54	162	149	147	438.1	22.5	460.6	35.1	983.4	355.1	180.6	198.6	13	236.1
1972–3	172	125	47	163	150	148	143.0	24.1	167.1	24.1	597.1	6.3	23.9	101.8	11	454.1
1973–4	146	125	21	131	124	125	59.9	—	59.9	—	340.1	.6	.4	.1	—	339.0
1974–5	205	137	68	139	139	141	36.5	.8	37.3	0	435.0	—	4.3	—	—	430.7
1975–6[2]	205	137		138	138	142	47.8	3.7	51.5	0	665.3	—	21.4	—	—	665.3
1976–7[2]	229	225		227	225	232	498.8			48.0	1,113					1,113.2
1977–8[2]	247	225	290	226	219	231	590.8			2.2	1,178					1,132.1
1978–9[2]	340	235	340	234	228	241	255.1			—	924.1					873.9
1979–0[2]	340	250	340	248	243	257	180.5			—	902.0					760.3
1980–1[2]	363	300	363	300	294	308	329.0			199.7	988.8					
1981–2[3]		320	381	320	313	329	345			189	1,062					

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[1] The national average loan rate at the farm as a percentage of the parity priced wheat at the beginning of the marketing year. [2] Preliminary. [3] Estimate. *Source: Agricultural Marketing Service, U.S.D.A.*

Average Price of No. 1 Dark Northern Spring Wheat at Minneapolis (14%[1] Protein) In Cents per Bushel

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Average
1969–0	182	173	179	180	183	184	184	184	183	189	190	192	184
1970–1	190	187	192	196	197	190	190	187	182	183	182	180	188
1971–2	173	166	172	177	172	172	174	169	170	173	176	170	172
1972–3	174	196	209	214	222	242	242	229	233	239	257	280	228
1973–4	307	450	480	450	448	498	552	583	533	441	423	507	473
1974–5	536	507	520	563	562	538	480	449	453	456	443	430	494
1975–6	469	490	512	503	474	446	454	470	466	448	465	475	469
1976–7	444	379	356	341	330	314	313	315	313	309	291	271	348
1977–8[1]	254	248	275	287	296	292	294	290	303	323	327	321	288
1978–9	311	313	326	341	347	332	330	336	342	345	373	432	335
1979–0	442	419	429	445	429	417	407	408	402	396	431	433	421
1980–1	469	455	456	482	495	477	481	478	467	480	477	456	471
1981–2	450	425	423	429	438	422	428	421	416	425			
1982–3													

[1] Prior to 1977–8, prices are for 15% protein. *Source: Agricultural Marketing Service, U.S.D.A.*

Average Price[1] Received by Farmers for Wheat in the U.S. In Cents per Bushel

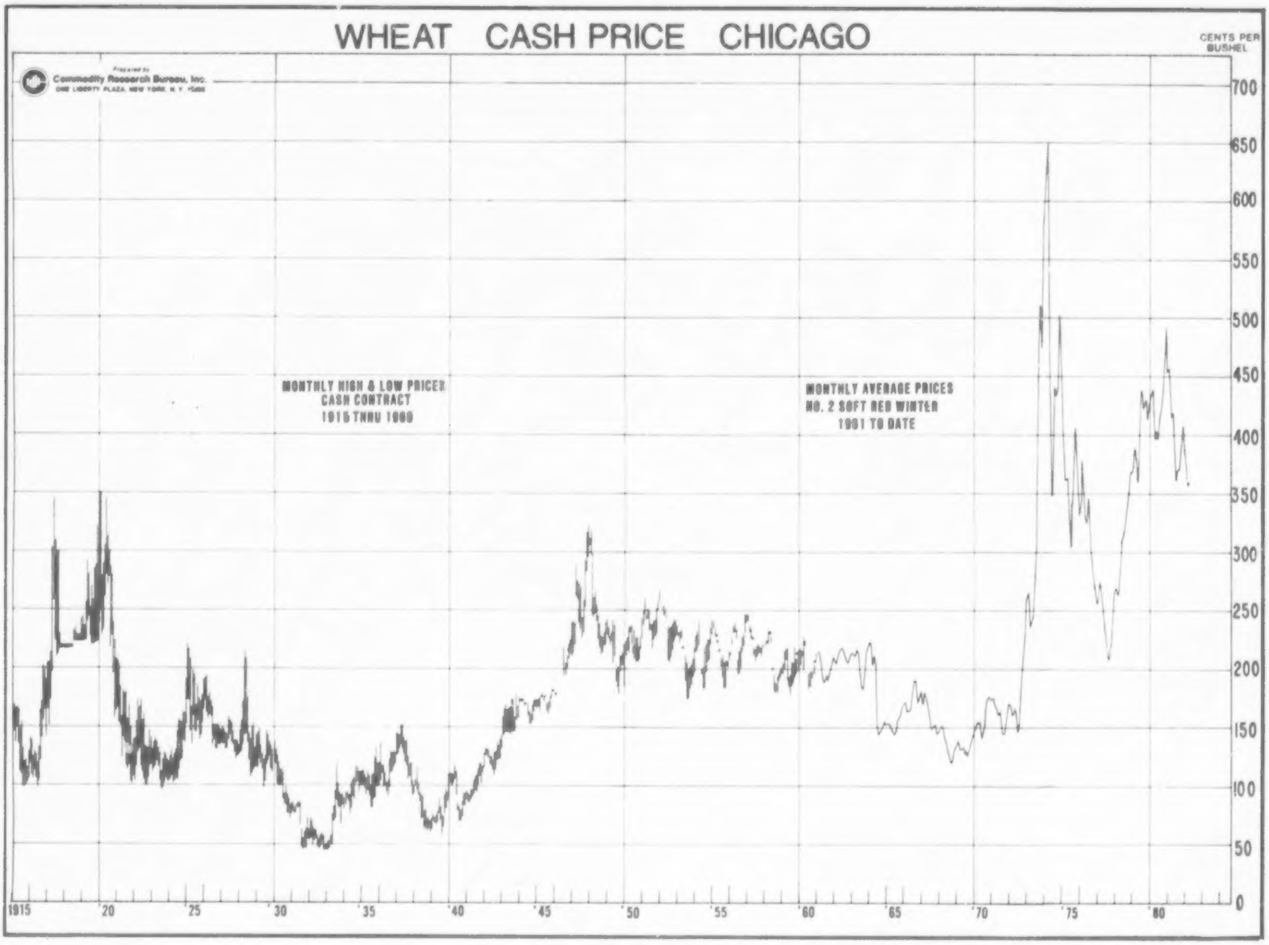
Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Average[2]
1969–0	115	119	124	128	129	130	129	130	128	132	131	123	124
1970–1	123	131	141	143	145	141	140	141	139	140	143	146	133
1971–2	134	128	126	130	131	134	133	134	134	136	138	133	131
1972–3	132	151	173	189	197	238	238	197	206	215	215	243	176
1973–4	247	445	462	422	420	478	529	552	496	398	352	357	396
1974–5	404	424	432	485	487	465	411	395	365	369	347	292	404
1975–6	333	389	411	402	358	341	343	366	365	350	343	346	355
1976–7	333	297	288	259	246	239	243	247	243	237	219	203	273
1977–8	204	213	216	230	246	247	253	259	267	282	282	281	233
1978–9	281	288	292	299	304	301	299	299	297	301	320	372	298
1979–0	389	374	387	398	394	381	374	378	364	358	369	369	382
1980–1	381	394	399	419	432	422	421	417	409	407	395	370	396
1981–2	362	362	365	377	385	380	378	370	367	368			
1982–3													

[1] Weighted average by sales. [2] Includes an allowance for unredeemed loans at average loan values.
Source: Statistical Reporting Service, U.S.D.A.

United States Grindings of Wheat by Mills In Millions of Bushels (of 60 Pounds Each)

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total
1969–0	44.1	48.0	49.5	51.9	49.3	51.3	48.9	47.4	47.4	45.8	44.5	44.1	572.2
1970–1	44.7	47.4	49.4	51.7	46.2	46.1	46.4	44.0	46.7	43.5	45.0	46.7	557.8
1971–2	45.2	49.4	49.3	48.2	44.5	46.3	45.9	44.5	46.9	43.8	46.9	47.2	558.1
1972–3	44.2	47.5	47.7	50.1	46.8	46.4	47.5	44.5	46.8	42.8	45.8	43.8	553.9
1973–4	44.7	48.9	48.1	49.3	46.3	46.9	48.9	45.0	46.1	41.4	42.2	41.6	549.4
1974–5	42.2	45.6	47.0	51.5	47.0	44.3	43.9	39.7	42.8	46.4	45.7	44.4	540.5
1975–6	47.4	49.0	51.2	54.1	45.2	46.0	50.0	47.3	51.7	49.9	49.5	50.4	575.2
1976–7	52.1	57.8	55.3	54.2	50.3	49.7	50.9	50.8	57.6	49.2	49.7	49.1	591.7
1977–8	46.1	54.8	52.2	52.4	53.2	52.1	48.4	48.9	54.8	50.5	53.6	51.5	606.9
1978–9[1]	49.7	56.1	50.5	55.3	52.9	48.9	50.9	48.2	52.5	50.2	55.1	50.3	620.6
1979–0[1]	59.0	58.9	52.4	58.9	55.7	50.6	55.0	50.4	49.1	47.2	49.8	47.8	634.8
1980–1[1]	51.8	53.0	54.8	58.4	54.6	56.9	57.5	51.1	55.3	53.4	52.2	52.6	651.5
1981–2[1]	51.2	53.3	54.6	55.6	51.0	50.0							
1982–3													

[1] Preliminary. *Source: Bureau of the Census*



Average Price of No. 2 Soft Red Winter Wheat at Chicago In Dollars per Bushel

Year	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Average
1969–0	1.28	1.30	1.27	1.31	1.36	1.41	1.48	1.49	1.55	1.53	1.55	1.48	1.43
1970–1	1.41	1.45	1.52	1.67	1.74	1.77	1.74	1.75	1.74	1.70	1.67	1.61	1.67
1971–2	1.64	1.54	1.45	1.45	1.53	1.60	1.71	1.69	1.61	1.62	1.66	1.63	1.58
1972–3	1.46	1.53	1.76	2.02	2.11	2.28	2.60	2.65	2.47	2.37	2.45	2.71	2.31
1973–4	2.82	3.08	4.75	5.11	4.75	5.47	5.84	6.30	6.50	5.59	4.33	3.48	4.93
1974–5	3.91	4.40	4.34	4.41	5.03	4.86	4.69	4.02	3.84	3.62	3.63	3.25	4.09
1975–6	3.03	3.42	3.82	4.06	3.84	3.49	3.32	3.45	3.78	3.66	3.34	3.30	3.54
1976–7	3.47	3.37	3.01	2.89	2.72	2.60	2.66	2.73	2.74	2.63	2.53	2.35	2.81
1977–8	2.29	2.20	2.08	2.20	2.27	2.59	2.65	2.69	2.64	2.82	3.11	3.14	2.56
1978–9	3.18	3.22	3.32	3.42	3.51	3.68	3.68	3.73	3.88	3.79	3.60	3.86	3.57
1979–0	4.36	4.39	4.23	4.28	4.30	4.13	4.26	4.36	4.39	4.18	3.96	4.04	4.24
1980–1	3.96	4.17	4.21	4.38	4.70	4.92	4.54	4.57	4.34	4.15	4.18	3.80	4.33
1981–2	3.60	3.70	3.70	3.87	3.97	4.08	3.86	3.77	3.57	3.59			
1982–3													

Source: Agricultural Marketing Service, Grain Division, U.S.D.A.

Commercial Stocks of Domestic Wheat[1] in the United States, at First of Month In Millions of Bushels

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1969–0	170.0	261.5	284.3	293.4	279.8	263.5	246.7	229.6	218.8	200.1	178.5	174.8
1970–1	215.0	205.6	289.0	302.6	302.6	285.6	253.0	241.8	215.9	184.8	176.1	151.4
1971–2	159.9	195.1	209.6	223.5	211.9	205.0	194.8	179.9	170.3	218.8	181.3	175.2
1972–3	206.5	268.1	324.2	372.3	356.0	323.1	297.2	267.7	241.2	212.9	174.2	124.1
1973–4	149.8	196.9	215.2	208.2	185.1	158.8	146.6	141.4	128.4	117.2	97.6	85.4
1974–5	162.9	253.1	217.4	267.5	276.3	256.6	217.8	179.3	149.5	126.6	105.3	83.0
1975–6	172.5	313.9	380.2	415.8	398.0	338.1	274.7	238.8	220.1	209.0	179.6	168.7
1976–7	291.9	420.3	461.6	504.9	477.5	432.3	416.5	388.2	370.0	350.4	332.7	320.6
1977–8	383.9	469.3	526.5	509.0	488.0	460.2	418.6	385.4	355.8	321.5	281.9	240.5
1978–9	250.9	305.6	319.9	318.9	272.0	246.9	223.1	199.1	181.1	166.6	144.7	131.0
1979–0	197.0	326.8	360.0	371.4	338.2	302.9	274.5	259.0	253.4	228.1	200.3	184.2
1980–1	283.9	432.6	502.4	505.9	490.5	458.1	412.2	347.9	299.4	243.4	194.9	194.4
1981–2	312.2	427.0	472.0	487.4	476.9	425.8	395.6	352.4	285.1	254.3	218.2	
1982–3												

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[1] Domestic wheat in store in public and private elevators in 39 markets and wheat afloat in vessels or barges at lake and seaboard ports, the first Saturday of the month. *Source: Department of Agriculture*

Commercial Stocks of Canadian Wheat[1] in Canada, at First of Month In Thousands of Metric Tons[2]

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1969–0	425.1	474.7	474.4	469.3	453.7	435.3	426.7	417.6	417.8	418.4	401.6	394.4
1970–1	401.8	437.2	402.8	411.9	379.5	364.4	371.1	359.7	353.8	347.2	330.5	310.0
1971–2	334.4	304.6	311.2	316.4	312.1	296.0	306.6	302.5	290.8	275.7	265.2	255.0
1972–3	287.2	276.2	290.4	277.4	293.8	292.6	291.5	285.7	264.2	218.7	214.0	178.1
1973–4	172.8	205.1	192.3	208.2	213.3	198.7	185.6	177.9	194.0	197.7	181.5	171.6
1974–5	211.0	241.9	217.1	222.4	203.9	204.0	202.8	199.3	192.0	198.3	167.7	151.9
1975–6	163.3	190.7	183.0	207.2	219.6	220.8	217.2	209.9	203.1	187.3	178.0	151.5
1976–7	153.6	183.5	185.6	222.8	223.9	244.2	253.0	236.7	233.7	220.5	208.5	189.8
1977–8[2]	4,905	4,985	5,477	6,263	6,358	5,948	5,645	5,108	5,159	5,194	4,987	4,711
1978–9	5,612	6,251	6,045	5,596	5,131	5,034	5,113	4,799	4,799	4,894	4,637	4,147
1979–0	4,810	5,149	5,581	5.990	5,992	5,754	6,172	6,069	5,731	5,260	4,620	4,539
1980–1	4,210	5,659	4,963	4,997	5,137	5,338	5,292	5,234	5,288	5,130	4,719	3,939
1981–2	4,311	5,697	5,742	5,924	5,082	5,829	6,131	5,526	5,953	5,901	4,820	
1982–3												

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[1] Canadian wheat in Canada exclusive of farm stocks, first Wednesday of month. [2] Data prior to July 1977 are in millions of bushels. *Source: Board of Grain Commissioners of Canada*

Open Interest of All Wheat Futures Contracts at Chicago,[1] K.C. & Mpls. In Millions of Bushels

Year	End of Month[1]												Kansas City[3]		Minn.[2]
	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct	Nov.	Dec.	Jan. 1	July 1	Jan. 1
1969	182.9	144.0	119.6	104.6	97.3	95.1	118.0	121.6	122.1	114.5	101.6	99.0	36.4	28.9	9.7
1970	91.7	93.5	81.2	76.9	66.5	69.5	93.1	90.4	96.8	98.0	88.6	85.5	34.0	34.3	8.8
1971	86.0	74.6	62.1	61.3	58.7	73.1	80.6	81.1	81.6	79.6	83.9	66.3	32.5	28.7	6.8
1972	61.8	66.2	53.1	52.6	50.3	60.0	77.6	100.1	98.6	109.2	112.3	95.2	21.2	26.9	5.9
1973	115.3	114.5	107.1	125.8	119.8	110.0	92.9	90.3	98.2	108.2	114.5	134.4	77.8	46.1	32.4
1974	154.1	161.5	154.8	144.8	136.9	136.4	147.4	147.5	153.0	164.5	150.6	150.0	53.2	48.0	30.3
1975	149.3	149.9	137.4	143.0	133.8	139.7	188.6	199.7	224.7	222.5	199.9	181.4	55.1	61.0	31.7
1976	165.8	206.7	202.9	171.2	183.5	226.4	237.2	227.2	233.8	270.2	260.5	229.4	102.5	120.6	27.4
1977	220.0	238.0	203.0	196.6	183.0	200.1	207.6	208.1	240.9	248.2	236.9	245.1	107.4	81.6	27.4
1978	229.4	200.7	180.6	164.9	193.2	163.1	190.0	240.9	255.9	241.7	240.4	186.4	102.7	84.8	25.9
1979	195.0	195.1	173.5	187.2	176.0	250.2	258.6	302.6	319.7	284.1	287.5	286.9	84.7	120.1	35.3
1980	279.5	266.6	222.5	214.2	213.5	270.0	345.4	345.7	376.3	442.9	420.1	350.5	121.0	92.0	31.5
1981	291.1	236.5	211.7	209.8	243.0	283.1	324.4	329.5	337.3	384.7	368.7	312.9	142.6	80.7	28.7
1982	335.9	274.7	244.5	234.9									137.0		28.7
1983															

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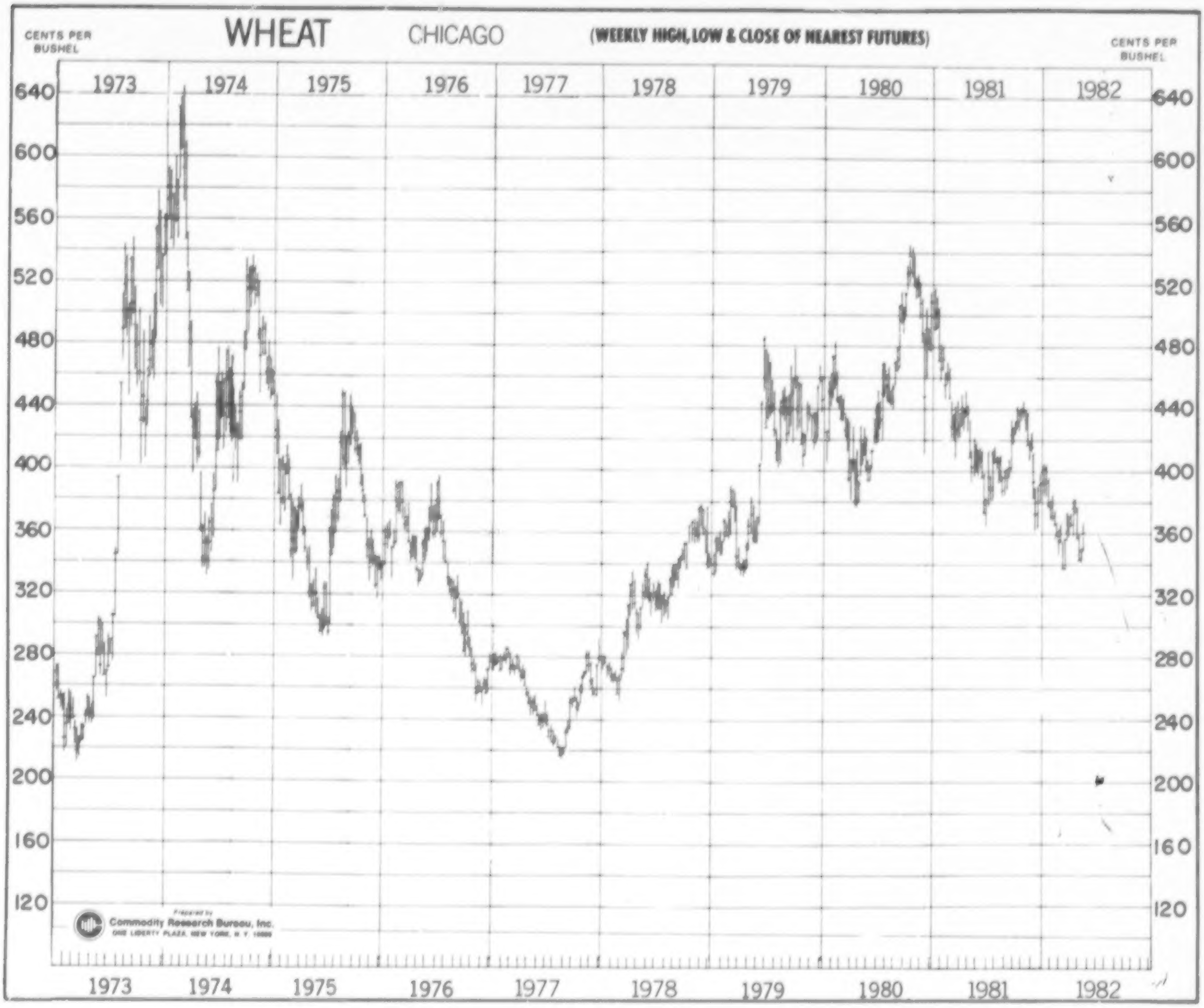
[1] Chicago Board of Trade. [2] Minneapolis Grain Exchange. [3] Kansas City Board of Trade.
Source: Commodity Futures Trading Commission



Volume of Trading in Wheat Futures at Chicago Board of Trade In Millions of Bushels

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total
1969–0	571.9	471.1	365.8	282.6	233.2	271.0	200.0	299.1	221.2	238.9	256.1	302.9	3,714
1970–1	458.3	534.0	491.1	377.4	343.0	293.3	230.2	247.6	230.7	338.2	267.1	424.1	4,235
1971–2	421.1	371.0	328.9	330.4	322.3	338.7	273.3	244.2	233.0	242.1	197.2	233.1	3,535
1972–3	516.7	1,065	981.7	809.6	774.7	835.4	767.3	810.6	782.5	725.5	927.6	765.1	9,764
1973–4[1]	898.0	758.8	1,018	1,087	1,131	1,130	1,153[1]	970.6	1,137	922.4	864.0	1,026	12,096
1974–5	1,285	1,049	907	1,154	810	653	902	731	768	637	682	858	10,436
1975–6	1,520	1,313	1,062	1,159	960	721	848	1,399	1,472	1,288	1,121	1,758	14,621
1976–7	1,796	1,228	1,876	1,180	1,005	601	577	810	888	693	597	846	12,097
1977–8	824	623	777	740	982	747	694	713	1,130	1,179	1,063	1,122	10,594
1978–9	1,133	1,312	1,034	1,260	1,272	878	889	843	805	660	1,092	1,878	13,056
1979–0	1,932	1,806	1,642	2,714	1,858	1,551	2,064	2,216	1,897	2,091	2,054	2,011	23,836
1980–1	3,336	1,949	2,551	2,720	2,190	2,060	1,855	1,509	1,735	1,334	1,412	2,130	24,781
1981–2	2,368	2,055	1,833	1,821	2,340	2,122	1,600	1,621	1,780	1,683			
1982–3													

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[1] Data prior to Jan. 1973 are for AT ALL "CONTRACT" MARKETS IN THE U.S.

Source: Commodity Futures Trading Commission; Chicago Board of Trade

High, Low & Closing Prices of May Wheat Futures on the Chicago Board of Trade In Cents per Bushel

Year of Delivery		Year Prior to Delivery									Delivery Year					Life of Delivery Range
		Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April	May	
1978	High	316	295	282½	274¼	252½	270¾	277½	297	293	287¾	276	314¼	335	326	335
	Low	294½	271½	263¼	245¼	238¾	241½	258	272½	267	272	259¼	261¼	296	291½	238¾
	Close	294½	275½	274¼	248¾	242¼	267¾	274	280	284¾	272¾	260¾	313½	309	325¾	—
1979	High	349	351	341½	337	327¼	335¼	355½	356	356	340	355½	361	354½	382½	382½
	Low	316	310½	316	308¼	297½	320	329¼	334½	328¾	323	328	335½	332	352½	297½
	Close	322	342½	320¼	314¾	323	332¾	351¼	354¾	333½	331¼	353¼	339¾	353¾	358¾	—
1980	High	371	398	514	486	475	481	500	469½	474¾	474	491	458½	429	428½	514
	Low	344½	366½	390	406½	411	430½	436	433	443	415¾	447	383	376½	383	344½
	Close	368½	390¾	451	415	464½	474¼	450¾	462¼	462¼	473½	447¼	383½	385½	414	—
1981	High	477	490	482½	503½	506	541½	570½	563½	553½	526	487	451	451	439½	570½
	Low	440½	451	444	462½	482½	502	517	541¼	445½	465	455	418½	426	393	393
	Close	450	453½	470	500¾	502¼	531	554¼	553¼	510¼	471¼	457½	433¾	433¾	398	—
1982	High	526	510	489	491	484½	465	476½	478½	453½	412	400½	400½	375½	382½	
	Low	500	479	447	455	446½	447	455	444½	384	382	360½	360½	345	357	
	Close	506	487	454	476	449½	458	474¼	447¾	400¾	391¾	366¾	366¾	370¼	357	
1983	High															
	Low															
	Close															

Source: Chicago Board of Trade

Wheat and Flour—Price Relationships at Milling Centers (In Dollars)

Crop Year (June-May[5])	At Kansas City					At Minneapolis				
		Wholesale Price of					Wholesale Price of			
				Total Products					Total Products	
	Cost of Wheat to Produce 100 lb. Flour[1]	Bakery Flour Per 100 lb.[2]	By-Products Obtained 100 lb. Flour[3]	Actual	Over Cost of Wheat	Cost of Wheat to Produce 100 lb. Flour[1]	Bakery Flour Per 100 lb.[2]	By-Products Obtained 100 lb. Flour[3]	Actual	Over Cost of Wheat
1969–0	5.47	5.51	.74	6.25	.78	5.74	6.03	.73	6.76	1.02
1970–1	5.58	5.58	.86	6.44	.86	5.92	6.27	.85	7.12	1.20
1971–2	5.43	5.34	.74	6.08	.65	5.48	5.99	.71	6.70	1.22
1972–3	7.13	6.78	1.11	7.89	.76	6.85	7.12	1.07	8.19	1.34
1973–4[5]	10.58	10.36	1.60	11.96	1.38	10.48	10.67	1.56	12.23	1.75
1974–5	10.43	10.07	1.61	11.68	1.25	11.04	11.28	1.58	12.86	1.82
1975–6	9.43	9.23	1.56	10.79	1.36	10.04	10.39	1.51	11.90	1.86
1976–7	7.06	7.02	1.66	8.68	1.62	7.46	8.12	1.70	9.82	2.36
1977–8	6.56	6.76	1.26	8.02	1.46	6.73	7.49	1.20	8.69	1.96
1978–9	7.85	7.89	1.47	9.36	1.51	7.76	8.22	1.34	9.56	1.80
1979–0	9.85	10.02	1.70	11.72	1.87	9.73	10.26	1.51	11.77	2.04
1980–1	10.30	10.38	1.99	12.37	2.07	10.95	11.00	1.78	12.78	1.83
Jun.–Sept. '81	9.69	10.33	1.55	11.88	2.19	10.08	10.82	1.49	12.31	2.23
Oct.–Dec. '81	9.93	10.13	1.79	11.92	1.99	9.84	10.52	1.43	11.95	2.11
Jan.–Mar. '82	9.85	10.66	1.41	12.07	2.22	9.63	10.82	1.23	12.05	2.42
Apr.–May '82										
Jun.–Sept. '82										
Oct.–Dec. '82										

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[1] Cost of 2.28 bushels. [2] Quoted as 95% patent at K.C. & standard patent at Minn., bulk basis. [3] Assumes 50–50 millfeed distribution between bran & shorts or middlings, bulk basis. [4] Preliminary. [5] Data prior to 1973–4 are for July–June crop year. *Source: Agricultural Marketing Service, U.S.D.A.*

WHEAT AND FLOUR

World Wheat Flour Production In Thousands of Metric Tons

Year	Argentina	Australia[2]	Canada	Spain	India[3]	Mexico	Israel	Japan	W. Germany	Egypt	Poland	South Africa	United Kingdom	United States	Yugoslavia
1969	2,184	1,248	1,740	3,228	1,740	1,236	323	3,384	2,364	N.A.		671	3,744	11,520	2,076
1970	2,352	1,284	1,812	3,192	2,220	1,332	329	3,396	2,412	N.A.		728	3,756	11,508	2,172
1971	2,388	1,308	1,776	2,976	2,520	1,382	360	3,468	3,436	1,920		715	3,780	11,352	2,280
1972	2,424	1,200	1,788	3,060	2,832	1,488	372	3,588	2,316	2,172		756	3,696	11,364	2,268
1973	2,304	1,092	1,728	2,904	1,932	1,560	420	3,576	2,376	2,340		806	3,768	11,304	2,292
1974	2,388	1,140	1,692	2,808	1,752	1,608	396	3,732	2,364	2,592	2,220	917	3,756	10,980	2,388
1975	2,484	1,260	1,788	3,000	1,680	1,584	456	3,996	3,060	2,736	2,292	919	3,888	11,208	2,316
1976	2,532	1,236	1,932	2,952	1,788	1,714	444	4,008	3,252	2,880	2,460	950	3,948	11,772	2,424
1977	2,616	1,176	1,872	2,976	2,136	1,680	468	3,960	3,264	3,240	2,256	908	3,900	11,856	2,388
1978	2,592	1,092	1,992	3,000	2,016	1,752	492	4,044	3,336	3,480	2,328	725	3,852	12,612	2,388
1979[1]	2,556	1,080	2,100	3,100	1,518	1,920	480	4,176	3,456	3,492	2,436	675	3,780	12,876	2,400
1980[4]	2,500	1,120			2,200	2,100	500	4,201	3,600	3,300			3,700	12,500	2,600
1981															

[1] Preliminary. [2] Twelve months ending June 30 of the year stated. [3] Represents 60 percent of the total production. [4] Estimate. *Source: United Nations*

Supply and Distribution of Wheat Flour in the United States In Thousands of Cwt.

Year	Wheat Ground 1,000 Bu.	Millfeed Production 1,000 Tons	Flour Production[1]	Flour and Product Imports[2]	Total Supply	Exports Flour	Exports Products[2]	Domestic Disappearance	Total Population July 1 Millions	Per Capita Disappearance Pounds
			1,000 Cwt.							
1969	567,956	4,458	254,194	274	254,468	26,333	16	228,119	202.7	113
1970	563,714	4,409	253,094	325	253,419	26,054	14	227,351	204.9	111
1971	555,092	4,279	249,810	341	250,151	20,685	15	229,451	207.1	111
1972	557,801	4,303	250,441	477	250,918	20,335	19	230,564	208.8	110
1973	567,287	4,395	254,661	550	255,211	16,107	26	239,078	210.4	114
1974	562,962	4,483	251,097	665	251,762	14,453	33	237,276	211.9	112
1975	582,675	4,701	258,985	621	259,606	12,364	22	247,220	213.6	116
1976	618,284	4,920	275,077	604	275,681	16,064	44	259,573	215.2	121
1977	618,125	4,787	275,784	604	276,388	22,053	37	254,298	216.9	117
1978	621,321	4,860	277,950	773	278,723	22,170	43	256,510	222.6	117
1979	636,375	4,945	284,051	823	284,874	20,927	86	263,861	225.1	117
1980	628,499	4,867	282,655	905	283,560	17,378	54	266,128	227.7	117
1981[3]	637,973	5,044	285,579	1,159	286,738	18,809	84	267,845	229.8	117

[1] Commercial production of wheat flour, whole wheat, industrial and durum flour and farina reported by Bureau of Census. Production prior to 1970 includes estimate for non-commercial wheat milled. [2] Imports and exports of macaroni products (flour equivalent). [3] Preliminary. *Source: Economics & Statistics Service, U.S.D.A.*

United States Wheat Flour Production In Millions of Sacks (of 100 Pounds Each)

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total
1969–0	19.6	21.5	22.2	23.4	22.2	23.1	22.0	21.0	21.3	20.8	19.8	20.0	256.9
1970–1	20.0	21.2	22.2	23.4	20.7	20.8	20.9	19.8	21.0	19.7	20.2	21.0	250.9
1971–2	20.2	22.2	22.1	21.7	20.1	21.0	20.7	20.0	21.1	19.7	21.1	21.1	251.0
1972–3	19.8	21.3	21.3	22.5	21.1	20.8	21.3	20.0	21.1	19.3	20.6	19.8	248.9
1973–4	20.1	21.9	21.6	22.0	20.7	21.0	22.1	20.1	20.8	18.5	18.9	18.6	246.3
1974–5	18.7	20.3	20.8	22.8	20.9	19.7	19.5	17.7	19.1	20.6	20.4	19.6	240.1
1975–6	21.2	21.7	22.7	24.1	20.1	20.5	22.3	21.1	23.1	22.4	22.1	22.3	263.6
1976–7	23.1	25.7	24.6	24.1	22.3	22.1	22.6	22.7	25.8	21.9	22.1	21.8	278.8
1977–8	20.6	24.4	23.4	23.4	23.8	23.4	21.8	21.8	24.3	22.6	24.1	23.1	276.7
1978–9	22.3	25.1	22.5	24.8	23.7	21.9	22.8	21.5	23.5	22.3	24.6	22.5	277.5
1979–0[1]	23.5	26.3	23.3	26.1	24.8	22.7	24.6	22.6	22.2	21.2	22.8	21.4	281.5
1980–1[1]	23.1	24.0	24.8	26.3	24.4	25.2	25.9	22.8	25.0	24.0	23.4	23.5	292.4
1981–2[1]	23.3	23.7	24.2	24.7	22.8	22.6							
1982–3													

[1] Preliminary. *Source: Bureau of the Census*

Stocks of Wheat Flour Held by Mills in the United States In Thousands of Sacks (100 Pounds)

Year	Jan. 1	April 1	July 1	Oct. 1	Year	Jan. 1	April 1	July 1	Oct. 1
1969	4,638	4,489	4,324	4,391	1976	3,907	4,510	3,923	3,621
1970	4,595	4,237	4,227	4,438	1977	1,334	4,248	4,167	3,537
1971	4,329	4,732	4,586	4,861	1978	4,160	4,096	3,459	3,342
1972	4,362	4,542	4,379	4,886	1979[1]	3,214	3,477	3,895	3,813
1973	4,746	5,581	5,393	4,174	1980[1]	3,975	3,323	4,268	3,716
1974	5,505	5,297	3,748	3,885	1981[1]	3,842	3,897	3,895	4,222
1975	4,499	4,755	4,434	4,140	1982[1]	3,460			

[1] Preliminary. *Source: Department of Commerce*

United States Wheat Flour Exports In Thousands of 100 Pound Sacks

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total
1969–0	2,249	919	1,534	2,752	2,052	1,499	2,232	1,726	1,860	2,238	1,837	2,523	23,601
1970–1	863	1,164	1,074	2,438	1,537	2,104	1,134	1,528	1,188	1,282	1,536	2,841	18,689
1971–2	1,627	1,374	1,178	982	908	1,060	1,318	1,472	1,169	757	2,300	2,494	16,639
1972–3	1,381	930	965	1,049	1,665	1,049	1,553	611	1,626	1,134	977	993	13,933
1973–4	1,352	1,596	1,607	483	612	912	914	1,015	904	832	957	858	12,042
1974–5	784	797	699	816	929	1,058	820	715	577	516	1,718	1,119	10,548
1975–6	1,084	999	753	735	588	555	423	379	525	1,149	1,789	2,184	11,163
1976–7	1,294	2,083	2,449	997	447	188	1,218	2,334	2,519	3,272	1,857	1,248	12,483
1977–8	1,194	1,146	730	473	766	1,237	723	1,539	1,774	2,554	2,297	2,694	17,127
1978–9[1]	1,674	2,145	1,963	1,505	357	486	382	1,165	1,163	752	2,689	1,727	16,008
1979–0[1]	1,669	2,489	2,218	1,223	842	1,971	1,018	1,300	2,713	867	918	1,606	18,833
1980–1[1]	894	2,137	1,396	1,034	522	609	980	1,896	2,241	2,932	1,724	2,350	18,715
1981–2	987	1,420	724	284	117	184	605						

[1] Preliminary. *Source: Department of Commerce*

Average Wholesale Price of Wheat Flour (Winter, Hard—95% Patent) at Kansas City —$ Per Cwt.

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Average
1970–1	5.53	5.53	5.71	5.71	5.65	5.59	5.59	5.61	5.50	5.49	5.50	5.59	5.58
1971–2	5.48	5.31	5.28	5.33	5.34	5.35	5.34	5.34	5.31	5.34	5.34	5.34	5.34
1972–3	5.463	6.163	6.363	6.413	6.500	7.500	7.375	6.813	6.875	7.163	7.038	7.738	6.78
1973–4	7.538	9.388	10.463	9.863	10.113	11.075	12.913	13.150	12.488	9.738	9.188	9.688	10.47
1974–5	10.725	10.150	10.325	11.363	11.775	11.200	10.438	9.938	9.125	8.975	8.550	8.088	10.050
1975–6	8.938	9.363	10.213	10.113	9.650	8.988	8.963	9.350	9.563	9.063	8.713	8.838	10.160
1976–7	N.A.	8.075	7.613	7.375	6.938	6.838	6.763	6.813	6.525	6.200	5.838	5.575	6.778
1977–8	5.850	5.913	6.088	6.325	6.575	6.488	6.988	6.675	6.963	8.250	7.463	7.225	6.734
1978–9	7.600	7.575	7.550	7.600	7.925	7.788	7.550	7.775	8.175	8.125	8.800	9.075	7.962
1979–0	10.388	10.088	10.075	10.100	10.600	10.463	10.000	10.263	9.813	9.488	10.013	9.838	10.094
1980–1	10.000	10.113	10.475	10.600	10.675	N.A.	10.663	10.400	10.275	10.525	10.313	10.525	10.415
1981–2	10.275	10.300	10.200	10.025	10.313	N.A.	10.638	10.700					

Source: Bureau of Labor Statistics (0212–0102.01)

Average Wholesale Price of Wheat Flour (Spring[1]), at Minneapolis In Dollars per Hundred Pounds (Bulk)

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Average
1969–0	6.01	6.03	5.91	5.95	5.99	6.00	6.00	6.06	6.09	6.10	6.08	6.11	6.03
1970–1	6.13	6.13	6.28	6.41	6.41	6.36	6.35	6.31	6.25	6.24	6.23	6.20	6.28
1971–2	6.11	6.06	5.98	6.00	6.01	6.00	6.00	5.99	5.91	5.91	5.93	5.95	5.99
1972–3	6.025	6.525	6.888	6.850	6.938	7.625	7.613	7.138	7.263	7.325	7.313	7.875	7.11
1973–4	7.738	10.280	10.600	9.913	10.225	11.525	12.975	13.313	12.700	10.188	9.838	10.963	10.85
1974–5	12.013	11.513	11.425	12.600	12.938	12.175	11.488	11.025	10.388	10.363	9.863	9.550	11.28
1975–6	10.213	10.513	11.238	11.163	10.675	10.150	10.150	10.213	10.713	10.250	10.075	10.350	10.48
1976–7	10.288	9.438	8.500	8.375	7.913	7.838	7.750	7.863	7.725	7.125	6.925	6.500	8.015
1977–8	6.588	6.688	7.025	7.188	7.338	7.200	7.588	7.325	7.650	8.638	8.388	8.100	7.476
1978–9	8.250	7.938	7.825	7.900	8.400	8.138	7.813	8.038	8.313	8.300	9.013	9.288	8.268
1979–0	10.638	10.513	10.463	10.563	10.713	10.438	10.088	10.413	10.113	9.688	10.375	10.338	10.362
1980–1	11.025	10.963	10.975	11.113	11.138	—	11.050	11.113	10.975	11.100	11.075	11.125	11.059
1981–2	10.813	10.750	10.588	10.525	10.675	10.338	10.763	10.950					

[1] Standard patent. *Source: Bureau of Labor Statistics* (0212–0103)

Wool

World wool production in 1981/82 was expected to be 3.61 billion pounds, clean, 0.7 percent more than in 1980/81 and 5 percent above the previous 5-year average. The Australian clip was anticipated to remain at the preceding season's level, despite a 3.5-percent decline in flocks. The higher-than-average slaughter in 1980, due to the drought, was outweighed by an unexpected increase in the lambing rate. Unsatisfactory weather in the Soviet Union was expected to cause sheep numbers to fall 1.6 percent from 1980/81, making it the lowest count in 4 years. The resulting wool clip was expected to be 1.3 percent less than last year. Wool production in New Zealand—the world's third largest producer, the second largest exporter, and the principal source of crossbred wools, was projected to increase only 1 percent in 1981/82, in contrast with a 26-percent rise in 1980/81. Record sheep numbers and high yields caused the 1980/81 expansion. The previous season's reduced demand for crossbred wool caused farmers to slaughter more than normal. China, the fourth largest producer, was expected to have a clip only 2 percent larger than in 1980/81 because of a persistent drought. In contrast, wool output in both Argentina and Uruguay was expected to increase more than 4 percent because of financial incentives resulting from currency devaluations and government support programs. The 1981/82 world wool clip was likely to have about the same composition as the 1980/81 clip, with merino grades making up 33 percent and crossbred and coarser grades 67 percent.

Revised data for the mill consumption of raw wool in 11 major manufacturing countries was 1.5 billion pounds during 1980, 3 percent more than in 1979. Mill consumption in first-half 1981 was 775.4 million pounds, 5 percent below a year earlier, but 11 percent above second-half 1980. Only three countries increased their raw wool consumption in first-half 1981 over the year-earlier period: the United States (10 percent), South Africa (8 percent), and Korea, (3 percent).

Australian Wool Corporation (AWC) stocks at the end of 1981 were 79.6 million pounds, 90 percent above the level of 6 months earlier. New Zealand stocks at the end of January 1982 were 400,000 bales, 16 percent above the quantity on June 30. The price of Australian wool as measured by the Market Indicator (a weighted-average index across 11 wool categories varied from 422 to 425 between mid-November and late January. Since then, the index rose sharply to a record 441, the result of sudden large purchases by Japan and European countries as well as the U.S.S.R. Of the offering, the Western European countries preferred the finer grades, while Japan and the Eastern European countries wanted the coarser Merino types, 56's–60's. Of the offerings in the first 3 weeks of February, the AWC purchased 5 to 7 percent, the lowest since the season began last July.

Stocks in the wool-manufacturing countries were believed to be low which should cause a rather firm demand for the remainder of the 1981/82 season.

U.S. wool production in 1981 totaled 58.4 million pounds, clean, versus 56.4 million in 1980, and 1982 production was projected at 58.6 million pounds, according to the Bureau of Census.

Mill consumptions of raw wool was 138.2 million pounds in 1981, 12 percent above the previous year. Wool use in apparel was 127.7 million pounds, 13 percent greater than 1980. The quantity of raw wool used in carpets was 10.5 million pounds, 5 percent more than the previous year. In 1980, the woolen system had a greater relative increase in the use of fine grade wools than did the worsted system. Reflecting expected lower consumer buying, mill consumption of raw wool was forecast at be about 135 million pounds in 1982.

U.S. stocks of wool, clean basis, were expected to total 41.6 million pounds at the end of 1982 versus 43.3 million at the end of 1981.

U.S. Government Price Support

The 1982 support price for shorn wool was set by the USDA's Agricultural Stabilization and Conservation Service at $1.37 per pound, up 2 cents per pound from the 1981 level. Pulled wool will continue to be supported at a level comparable to the support price for shorn wool through payments on unshorn lambs.

As in past years, shorn wool payments to producers will be based on a percentage of each producer's returns from sales. The percentage will be that which is required to raise the national average price received by all producers for shorn wool in 1982 up to the $1.37 support price.

Estimated World "Supply" Stocks of Raw Wool (Clean Basis) In Millions of Pounds

At Beginning of Season[1]	Australia (Carry-over)	Australian Wool Corp.	New Zealand (Carry-over)	New Zealand Wool Board	South African (Carry-over)	South African Wool Board	Argentina	Uruguay	British Wool Mkt. Board	Total Supply Stocks	Production During Season	Total Available Supplies
1973–4	22.0	.4	22.0	—	2.2	—	114.6	—	4.4	445.3	3,187.9	3,633.2
1974–5	50.7	33.1	19.8	4.4	8.4	4.4	92.6	4.4	4.4	379.2	3,185.6	3,564.8
1975–6	33.1	302.0	13.2	52.9	2.2	28.7						
1976–7	28.7	255.7	13.2	11.0	2.2	15.4	30.9	4.4	4.4	85.9	3,157.0	3,242.9
1977–8[2]	24.3	209.4	8.8	24.3	2.2	8.8	88.2	19.8	4.4	233.6	3,331.2	3,564.8
1978–9							116.8	4.4	4.4	557.7	3,330.0	3,887.7

[1] At July 1 for all except Argentina & Uruguay which are Oct. 1. [2] Preliminary.

Source: U.S. Dept. of Agriculture (compiled from reports of the Commonwealth Secretariat.)

World Production of Wool[3] In Thousands of Metric Tons (Greasy Basis)

Year	Brazil	Argentina	Australia	China	France	Morocco	India	N. Zealand	Spain	Turkey	South Africa	Un. Kingdom	United States	Uruguay	U.S.S.R.	World[1] Total
1970	40.6	199.8	885.4	86.4	20.3	15.5	36.0	333.9	33.8	47.5	126.8	47.2	85.0	80.0	418.9	2,663
1971	34.4	188.8	880.4	88.6	21.0	13.5	37.0	322.3	32.1	47.5	121.2	44.5	81.9	62.0	428.8	2,606
1972	37.1	177.0	735.2	90.3	21.2	20.0	30.8	308.8	31.7	50.3	114.7	46.7	79.6	61.0	420.0	2,413
1973	36.5	179.2	700.9		21.4	23.0	30.1	284.8	31.8	47.3	113.3	49.4	72.0	53.0	433.0	2,355
1974	34.4	183.4	793.5		21.7	19.0	30.5	294.1	34.0	52.4	114.6	49.9	64.7	55.0	461.0	2,495
1975	31.3	190.2	757.4		21.9	20.0	31.0	311.8	29.0	53.0	114.3	50.3	58.6	60.0	463.0	2,481
1976	30.3	176.3	702.7	61.0	22.0	21.0	32.0	302.5	28.6	53.9	110.5	49.9	53.8	60.4	432.0	2,457
1977	26.9	172.0	677.4	61.0	22.4	20.0	33.1	310.8	28.0	54.1	113.4	48.0	49.9	62.2	455.0	2,465
1978	28.0	170.8	709.2	61.0	22.6	12.0	34.2	310.8	29.0	56.7	113.4	49.2	46.2	65.8	460.0	2,433
1979[2]	29.0	172.1	731.0	61.0	26.2	12.6	34.5	320.6	29.5	57.5	109.0	48.3	47.6	66.2	470.0	2,486
1980[1]	27.2	172.0	712.0	61.0	26.7	12.7	34.5	343.0	30.0	58.0	110.0	50.0	47.8	71.6	485.0	2,514
1981																

[1] Estimated. [2] Preliminary. [3] Includes shorn, pulled, & wool exported on skins. *Source: Foreign Agricultural Service, U.S.D.A.*

World Consumption of Wool In Millions of Pounds (Clean Basis)

Year	Argentina	Australia	Belgium	Canada	France	W. Germany	Italy	Japan	Netherlands	New Zealand	South Africa	United Kingdom	United States[3]	Uruguay	Soviet Bloc	World Total
1969	55	77	93	14	268	166	236	395	19	19	31	385	313	46		3,325
1970	60	81	89	11	275	150	204	403	18	24	27	337	240	48		3,308
1971	74	77	67	10	318	163	195	402	19	28	26	311	191	45		3,263
1972	80	75	68		322	170	227	400	19			336	219			3,480
1973	67	62	51		259	119	202	411	14			301	151		1,037	3,180
1974	71	47	45		231	85	189	258	12			248	93		1,102	2,861
1975	70	48	54		236	120	196	294	12			244	110		1,099	3,032
1976[1]	71	61	70		276	145	262	346	14			264	122		1,070	3,293
1977[2]	81	57	68		259	134	251	291				250	108		1,116	3,176
1978[2]													115			
1979[2]													117			
1980[2]													123			
1981[2]													138			
1982																

[1] Preliminary. [2] Estimate. [3] Consumption on woolen & worsted systems only.
Sources: Bureau of the Census; Commonwealth Economic Committee

Wool: Mill Consumption, by Grades in the U.S. Scoured Basis In Millions of Pounds

	Apparel Wool[1]							
	Woolen System			Worsted System				
Year	60's & Finer	50's Up to 60's	Total [4]	60's & Finer	Coarser Than 60's	Total	All Total	Carpet Wool[2]
1971	14.8	21.7	40.4	37.7	38.1	75.8	116.2	75.2
1972	19.9	26.7	50.2	54.6	37.4	92.0	142.2	76.4
1973	13.6	24.7	41.7	40.2	28.0	68.2	109.9	41.4
1974	10.9	18.9	33.0	23.8	18.0	41.8	74.9	18.6
1975	15.7	25.3	41.0	34.1	19.0	53.1	94.1	15.9
1976	20.6	29.2	49.8	34.9	21.9	56.8	106.6	15.1
1977	22.3	26.3	48.6	27.6	19.3	46.9	95.5	12.5
1978	24.4	28.6	53.0	32.7	16.5	49.2	102.3	13.0
1979	29.0	28.3	57.4	27.2	21.9	49.2	106.5	10.5
1980[3]	28.2	28.8	57.0	35.5	20.9	56.4	113.4	10.0
1981[3]	35.1			41.2			127.7	10.5
1982								

[1] Domestic & Duty-Paid Foreign. [2] Duty-Free Foreign. [3] Preliminary. [4] Includes 48's & coarser prior to 1975. *Source: Economic Research Service, U.S.D.A.*

WOOL

Wool Goods[1] Production in the United States In Millions of Linear Yards

Year	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total Year	Year	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total Year
1969	65.6	63.0	48.1	45.7	222.5	1976	26.0	26.4	22.9	21.9	97.3
1970	58.1	54.2	35.4	30.9	178.6	1977	26.2	26.7	23.3	25.4	101.6
1971	37.0	32.6	22.7	21.1	113.3	1978	28.2	31.2	27.3	30.0	116.6
1972	25.3	27.7	22.2	26.6	101.8	1979[2]	33.5	31.3	26.5	28.2	117.4
1973	28.4	29.6	23.7	19.3	101.1	1980[2]	33.6	33.9	43.7	40.0	114.8
1974	23.6	22.7	17.6	17.1	81.0	1981[2]	53.7				
1975	17.3	19.4	20.4	21.7	78.9	1982					

[1] Woolen and worsted woven goods, except woven felts. [2] Preliminary. *Source: Bureau of Census*

United States Imports[1] of Unmanufactured Wool (Clean Yield) In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1969	10.9	9.2	19.9	22.0	19.2	14.7	15.9	23.7	12.3	7.5	17.5	16.4	189.2
1970	12.9	15.7	18.0	12.3	11.3	17.0	13.7	14.7	11.2	8.4	6.9	10.9	153.1
1971	12.0	9.4	11.2	11.1	11.5	10.4	13.8	17.0	13.3	5.3	1.0	10.7	126.6
1972	7.1	10.5	7.2	11.8	8.6	6.3	9.9	10.7	6.2	5.8	6.7	5.7	96.6
1973	7.7	7.2	5.7	5.6	6.4	6.8	5.4	4.7	2.5	2.8	2.0	1.9	57.9
1974	1.6	3.0	2.5	2.5	3.1	3.2	2.4	2.9	1.8	1.7	1.0	1.3	26.9
1975	2.2	1.4	1.7	2.1	2.2	2.9	2.4	2.4	2.9	4.9	4.0	4.4	33.6
1976	5.8	5.3	5.6	5.9	4.7	3.9	4.8	5.7	4.6	4.0	3.3	4.4	58.0
1977	5.2	5.0	4.7	5.1	7.4	7.4	4.0	4.7	2.4	2.2	1.8	3.0	53.0
1978	3.7	3.2	4.1	4.9	4.0	3.8	4.7	5.4	3.4	4.0	4.8	4.0	50.4
1979	4.5	3.4	4.2	3.9	4.3	3.1	4.1	3.3	2.6	2.0	3.5	3.5	42.3
1980	6.1	4.9	5.1	4.6	5.7	4.5	5.3	4.8	4.1	3.9	3.6	4.0	56.5
1981	6.9	7.7	6.6	7.5	8.6	4.9	6.5	5.3	3.7	6.0	5.1	5.3	75.3
1982													

[1] Data are imports for consumption. *Source: Department of Commerce*

Price Received by Farmers for Shorn[2] Wool in the U.S. In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average[1]
1969	37.4	38.2	40.4	42.8	43.5	42.8	41.4	39.9	39.2	39.6	38.6	38.6	41.8
1970	35.6	35.7	36.5	37.5	36.6	37.5	37.1	34.2	31.6	32.5	31.7	28.2	35.5
1971	25.3	24.6	23.3	22.9	21.2	21.3	18.7	17.9	18.9	17.0	17.9	16.8	19.4
1972	17.7	19.6	24.2	29.1	34.5	39.4	39.2	38.4	35.8	50.9	52.5	49.3	35.0
1973	78.0	77.3	90.4	86.1	82.3	84.5	83.0	78.8	83.7	74.3	70.1	70.6	82.7
1974	78.4	70.0	66.1	62.5	60.6	59.7	61.1	52.5	48.7	49.6	45.8	43.5	59.1
1975	40.9	33.7	36.7	43.6	48.0	46.7	48.0	46.2	44.8	52.8	47.4	43.3	44.7
1976	50.7	58.4	59.5	64.4	65.1	68.1	68.3	67.0	68.2	70.8	71.2	69.5	65.7
1977	72.9	72.5	72.4	72.5	71.9	73.7	72.3	70.4	66.4	71.3	70.6	69.3	72.0
1978	72.6	68.9	71.2	73.7	73.9	76.2	74.8	74.6	72.7	77.1	81.2	73.6	74.5
1979	78.7	77.3	79.5	86.9	88.0	89.4	87.7	81.8	84.9	87.5	89.0	86.5	86.3
1980	82.1	86.8	93.5	92.2	86.6	86.5	85.8	85.5	84.7	89.4	92.1	90.9	88.1
1981[3]	90.6	92.8	91.8	101.0	103.0	106.0	102.0	94.6	89.0	89.6	90.8	85.3	95.0
1982[3]	80.4	80.4	83.4	89.1									
1983													

[1] Weighted average. [2] Grease basis. [3] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

Salient Statistics of Wool in the United States

						Pulled Wool Production			Apparel Wool (Clean Content)					Mill Consumption	
Year	Sheep & Lambs Shorn[2] Ths.	Weight per Fleece Lbs.	Shorn Wool Production Ths. Lbs.	Price per Lb.	Value of Production Mil. $	Avg. Weight per Skin Lbs.	Total	Total Wool Production	Domestic Prod.	Exports Domestic Wool	Imports for Consumption[4]	Total New Supply[3]	Carpet Wool Imports for Cons.	Apparel	Carpet
							Thousand Pounds								
1969	19,584	8.46	165,749	41.8	69.5	3.46	17,100	182,849	91,528	196	93,230	184,855	95,664	219,035	83,758
1970	19,163	8.43	161,587	35.4	57.2	3.40	15,200	176,787	88,158	200	79,810	167,768	73,325	163,652	76,609
1971	19,036	8.41	160,156	19.6	31.4	3.46	12,000	172,156	85,142	6,318	42,682	121,506	83,893	116,310	75,151
1972	18,770	8.44	158,506	35.0	55.5	3.40	9,700	168,206	90,762	11,224	24,790	104,328	71,849	142,233	76,368
1973	17,425	8.25	143,738	82.7	118.8	3.49	8,000	151,738	81,726	3,726	19,587	97,601	40,694	109,872	41,394
1974	15,956	8.23	131,382	59.2	77.8	3.31	5,700	137,082	73,525	4,271	11,800	81,053	15,147	74,856	18,595
1975	14,403	8.30	119,535	44.7	53.5	3.33	5,300	124,835	67,488	7,674	16,605	76,419	17,021	94,117	15,908
1976	13,669	8.11	110,817	65.7	73.1	3.32	4,000	114,817	62,197	1,130	38,387	99,454	19,076	106,629	15,117
1977	13,270	8.11	107,159	72.0	77.1	3.28	1,700	108,859	58,455	385	36,303	94,373	22,655	95,485	12,526
1978	12,609	8.08	101,874	74.5	75.9	3.16	1,000	102,874	55,082	425	27,000	81,657	23,404	102,246	13,009
1979	13,068	8.02	104,860	86.3	90.5	3.20	900	105,760	56,022	313	20,283	75,992	22,047	106,533	10,513
1980[1]	13,255	7.95	105,367	88.1	92.8	3.08	1,050	106,417	56,444	304	30,491	86,631	25,992	113,423	10,020
1981[1]	13,484	8.14	109,753	94.5	103.7		1,150	110,903			48,106		26,146	127,701	10,538
1982															

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[1] Preliminary. [2] Includes sheep shorn at commercial feeding yards. [3] Production minus exports plus imports; stocks not taken into consideration. [4] Apparel wool includes all dutiable wool; carpet wool includes all duty-free wool.
Source: Economics Service, U.S.D.A.; Dept. of Commerce

Consumption of Apparel Wool in the United States (Clean Basis) In Millions of Pounds (Clean Basis)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1969	22.9	17.1	18.2	23.5	18.9	18.2	18.8	16.9	14.2	19.5	14.7	16.1	219.0
1970	16.0	15.6	18.8	15.6	14.1	16.3	9.8	10.8	13.3	10.7	10.8	12.0	163.7
1971	10.2	9.5	13.0	9.4	9.7	12.1	7.3	8.0	10.7	8.8	7.7	9.8	116.2
1972	9.5	10.4	14.6	11.8	12.6	15.5	9.0	12.6	13.6	10.9	12.5	9.2	142.2
1973	12.6	9.9	9.6	10.9	9.8	9.4	8.5	8.4	7.7	10.0	6.8	6.2	109.9
1974	7.8	6.3	6.4	7.2	6.6	6.5	5.5	6.1	5.6	6.9	5.5	4.6	74.9
1975	6.5	5.8	6.5	8.4	7.8	7.6	8.1	8.1	8.1	10.3	7.8	9.3	94.1
1976	8.9	8.7	12.0	9.1	8.8	11.1	7.3	7.6	9.3	7.9	6.9	9.0	106.7
1977	8.2	8.3	10.0	7.9	7.7	9.5	5.2	7.4	8.6	7.7	7.0	7.9	95.5
1978	7.7	8.2	10.5	8.8	9.2	10.3	7.0	8.4	9.4	8.1	8.1	7.5	102.2
1979[1]	10.1	8.2	8.9	10.0	8.5	7.8	7.5	7.6	6.7	9.9	8.5	8.4	106.5
1980[1]	11.3	10.2	9.8	11.4	9.2	8.3	7.5	8.4	7.7	10.9	9.0	10.0	113.4
1981[1]	10.2	11.0	12.9	10.8	10.2	12.8	8.4	10.1	11.4	9.4	9.4	11.2	127.8
1982													

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[1] Preliminary. *Source: Bureau of the Census*

Average Wool Prices[1]—Australian—64's, Type 62, Duty Paid—U.S. Mills In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1975	199.0	204.0	209.0	211.2	219.6	209.0	206.8	204.3	198.5	197.3	206.0	205.0	205.8
1976	205.5	206.0	—	—	212.4	213.5	213.5	216.5	224.2	232.5	224.0	227.3	217.5
1977	229.0	227.3	227.6	228.3	228.0	226.3	227.0	224.0	227.0	227.0	230.5	226.5	227.4
1978	228	230	231	232	233	236	236	236	236	236	237	237	234
1979	237	249	265	273	278	282	283	283	293	309	290	280	277
1980	292	310	306	299	310	321	311	306	311	306	320	321	309
1981	319	312	307	314	316	319	323	320	316	316	317	312	316
1982	301												
1983													

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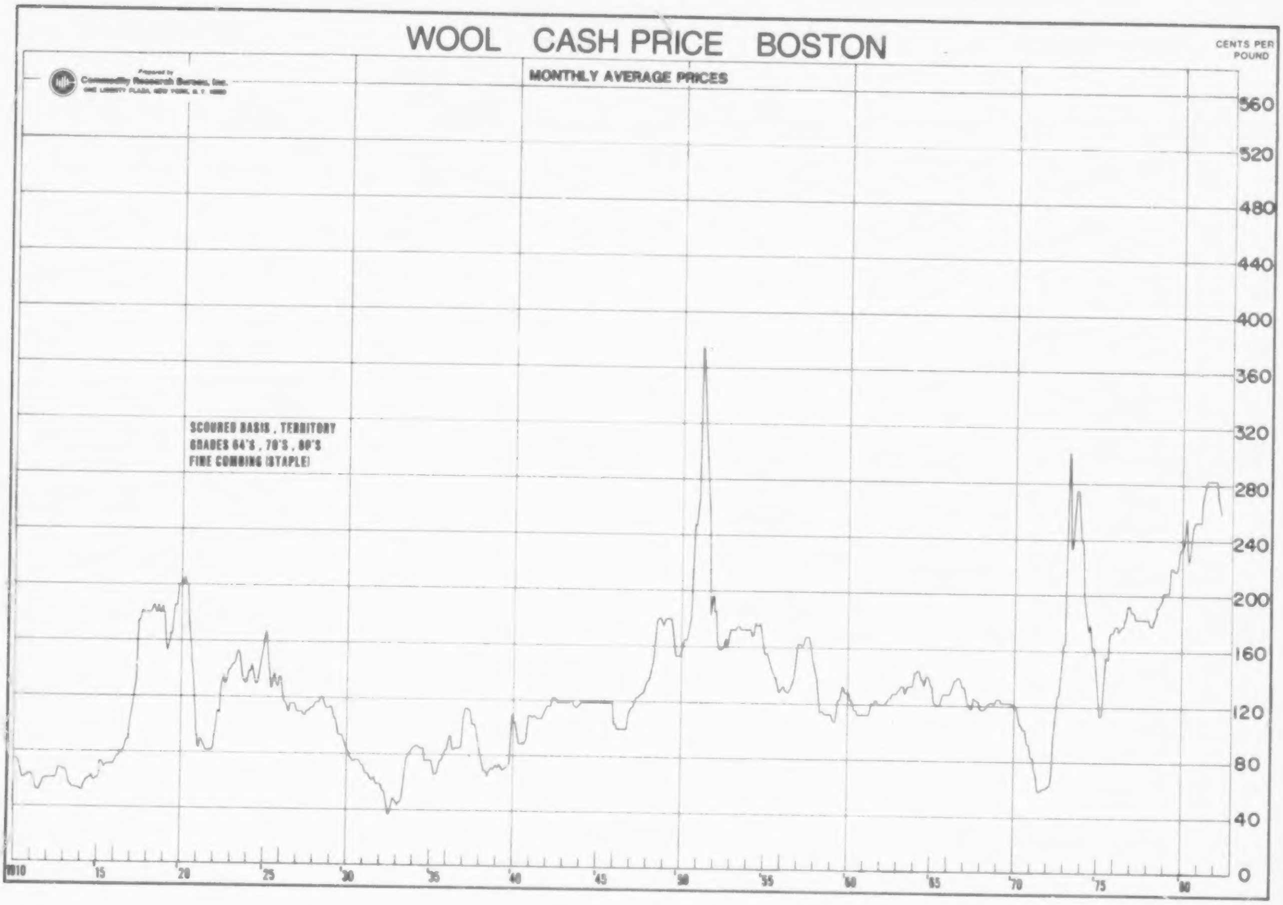
[1] Raw, clean basis. *Source: U.S. Dept. of Agriculture*



Average Wool Prices—Domestic[1]—Graded Territory, 64's, Staple 2¾″ & Up—U.S. Mills —¢ Lb.

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1969	124.5	123.9	122.0	122.0	122.0	122.0	122.0	122.0	122.0	121.8	121.0	119.5	122.1
1970	118.5	118.5	111.0	108.1	107.0	105.5	102.5	102.5	95.3	92.5	92.5	85.0	102.4
1971	82.5	82.5	75.7	70.8	63.0	59.7	59.0	59.5	61.0	61.0	60.5	61.5	66.4
1972	62.5	64.0	70.8	94.4	113.0	120.0	127.0	127.5	135.0	145.5	163.5	165.0	115.7
1973	188.0	232.5	302.5	233.8	233.5	257.5	260.0	275.0	275.0	263.0	241.9	237.5	250.0
1974	236.0	222.5	197.5	185.0	174.0	178.8	166.5	161.2	162.5	156.5	141.2	130.8	176.0
1975	116.2	112.5	113.8	134.0	150.6	155.6	153.8	171.2	172.5	172.5	172.5	177.5	150.2
1976	177.5	177.5	173.5	176.2	177.5	177.5	182.5	182.5	187.5	192.5	192.5	187.5	182.1
1977	187.5	187.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.0	183.3
1978	182	178	178	181	184	192	192	192	195	197	202	202	190
1979	202	202	206	220	220	218	218	218	220	230	233	233	218
1980	238	253	256	231	225	233	245	251	253	253	253	253	245
1981	253	268	274	278	278	283	283	283	283	283	283	283	278
1982	275												

[1] Raw, shorn, clean basis. *Source: U.S. Dept. of Agriculture*

Zinc

Strikes at several mines and the closing of two mines contributed to reduced U.S. mine production of zinc in 1981 compared to 1980. Domestic mine output of recoverable zinc was 9 percent lower in 1981 than in the previous year. Smelter production of slab zinc, reported by the American Bureau of Metal Statistics, was 8 percent lower than in 1980, as smelter feed material remained in short supply. Tennessee, Missouri, New York, and Idaho accounted for about 79 percent of 1981 mine output. U.S. output of zinc oxide was off about 6.4 percent in 1981.

Net U.S. import reliance on zinc represented about 67 percent of apparent consumption in 1981 versus 60 percent in 1980, according to preliminary U.S. Bureau of Mines data. General imports of ores and concentrates in 1981 were 9.4 percent below the 1980 level, but imports of slab zinc were about 47 percent higher than a year earlier.

Total non-Communist consumption of zinc in 1981 was 4.138 million tonnes, off slightly from the 1980 level because of reduced demand, according to the International Lead and Zinc Study Group.

U.S. Consumption

U.S. consumption of slab zinc in 1981 was about 3 percent larger than in 1980, but there was considerable disparity in use by various segments of the industry, according to preliminary data of the U.S. Bureau of Mines. The consumption of slab zinc in galvanizing (the major market) was about 2.6 percent smaller than in 1980 but use of sheet and strip in this category was 12.5 percent higher than a year earlier; the brass and bronze segment used 12 percent more zinc, with sheet and strip, and rod and wire accounting for 10 percent and 13 percent gains, respectively. Zinc-base alloy use dropped 18 percent in 1981, primarily in die casting. Construction materials accounted for about 40 percent of zinc consumption in 1981, based on a U.S. Bureau of Mines estimate in late 1981; transportation equipment—19 percent; electrical equipment—12 percent; machinery and chemicals—18 percent; others—11 percent. According to the National Association of Recycling Industries, zinc scrap consumption in the U.S. in 1981 was the highest since 1977, and scrap zinc's share of the domestic market was a record-large 15.4 percent.

Total U.S. stocks of slab zinc at the end of 1981 were about 41 percent higher than a year earlier. Consumer stocks were up only 3.6 percent and merchant stocks up 4.4 percent. However, producer stocks were 62 percent above the year earlier level.

The reopening of Tara Mines, Ltd. in Ireland in February 1982 after a 7-month strike, and the start-up of Cominco's Polaris mine in the Canadian Arctic, were expected to end the shortage of zinc concentrates which lasted for much of 1981. In the U.S., production of copper-coated zinc pennies was expected to require about 40,000 tonnes of zinc a year.

The U.S. producer price for High Grade zinc was 41.25 cents per pound in January 1981, rose to 49.25 cents by July influenced by foreign and domestic mine strikes, and later eased to the 46.25 cent level by December 1981.

Futures Markets

Zinc futures are traded on the London Metal Exchange (LME).

Salient Statistics of Zinc in the United States In Thousands of Metric[7] Tons

	Net Import Reliance As a % of	Production of Slab Zinc						Dec. 31 Stocks at			Consumption					
		Primary											Base Scrap[3]			
Year	Apparent Consumption	Domestic	Foreign	Total	Value Mil. $[6]	Redistilled Secondary	Total Production	Producer Plants	Consumer Plants	Gov't. Stockpile	Zinc Slab	Ores[2]	Zinc	Copper	Aluminum[4]	Total
1969		458.8	581.8	1,040.6	162	70.6	1,111.0	65.8	102.0	167.8	1,385.4	126.7	100.6	194.4	7.1	1,814
1970		404.0	473.9	877.8	161	77.2	955.0	124.2	92.7	216.9	1,187.0	124.8	93.5	160.0	6.4	1,572
1971		403.8	362.7	766.4	162	80.9	847.0	48.6	91.5	140.1	1,254.1	119.3	104.0	166.5	6.9	1,651
1972		401.0	232.2	633.2	170	73.7	707.0	30.1	125.0	949.6	1,418.3	118.3	93.0	191.3	7.9	1,844
1973	64	399.1	184.4	583.5	198	83.2	667.0	25.9	114.3	677.0	1,503.9	129.7	90.5	192.0	7.6	1,932
1974	59	347.0	208.2	555.2	359	78.5	634.0	39.7	211.2	391.6	1,287.7	127.1	87.7	162.5	8.0	1,673
1975[7]	61	279.4	118.0	397.4	366	52.5	449.9	67.7	97.3	349.9	839.4	75.1	177.8	106.3	.5	1,117
1976	59	346.4	106.1	452.6	359	62.2	514.7	88.0	109.9	349.4	1,028.9	91.8	138.4	139.2	.5	1,394
1977	57	322.2	86.2	408.4	309	45.9	454.3	83.8	86.5	347.8	999.5	86.5	139.6	139.6	.6	1,368
1978	66	267.4	139.3	406.7	207	34.8	441.5	37.9	99.3	345.9	1,050.6	90.0	73.2	141.5	.5	1,442
1979	63	255.3	217.1	472.5	220	53.2	525.7	59.1	92.6	345.7	1,000.6	79.7	146.7	166.4	.9	1,394
1980[1]	60	231.9	108.6	340.5	276	29.4	369.9	22.6	69.6	342.4	811.1	59.0	133.0	138.2	1.1	1,142
1981[5]	67			345			341.8	36.5	72.1		834.7	58.2	85.0	138.0	1.1	1,117
1982																

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[1] Preliminary. [2] Recoverable zinc content. [3] Excludes redistilled slab & zinc produced by remelting. [4] Aluminum & magnesium-base scrap. [5] Estimate. [6] Domestic ores (recoverable content). [7] Data prior to 1975 are in THOUSANDS OF SHORT TONS. *Source: Bureau of Mines*

ZINC

World Smelter Production of Zinc In Thousands of Metric[4] Tons

Year	Australia	Belgium	Canada	France	W. Germany	Italy	Japan	Mexico	Norway	Peru	Poland	Spain	U.S.S.R.	Un. Kingdom[3]	United States	World Total
1969	267.2	283.5	466.4	279.5	162.2	143.7	785.1	88.5	64.8	68.6	228.7		672.0	166.4	1,041	5,482
1970	287.3	265.9	460.7	246.6	114.3	156.6	745.4	88.9	68.0	75.7	230.4		672.0	161.6	877.8	5,321
1971	285.2	234.5	410.0	241.0	121.7	153.1	789.7	85.8	69.0	63.0	242.5	94.4	717.0	128.4	766.4	5,229
1972	325.2	286.3	524.9	288.3	235.5	171.8	887.7	92.4	80.9	74.0	251.3	109.9	717.0	81.4	633.2	5,656
1973	330.1	309.8	587.0	285.9	283.3	200.6	929.2	78.7	89.2	76.8	259.0	118.0	740.0	92.4	583.5	5,877
1974	305.2	318.3	469.9	305.0	441.0	216.5	936.9	150.9	79.8	78.7	257.0	143.3	750.0	93.0	555.2	6,183
1975	213.1	235.0	470.6	164.9	302.4	198.1	769.7	169.7	67.1	69.7	267.9	147.0	760.0	58.9	438.1	5,526
1976[4]	249.2	241.2	472.3	233.3	304.8	191.2	776.0	175.2	64.4	64.7	237.0	161.1	800.0	41.6	514.7	5,675
1977	256.4	258.2	494.9	238.3	354.8	169.4	805.0	174.4	69.8	66.9	228.0	156.6	815.0	81.5	454.3	5,805
1978	294.8	240.5	495.4	231.2	306.8	177.6	792.7	173.1	71.6	68.4	222.0	177.0	850.0	73.6	441.5	5,877
1979	309.6	261.7	580.4	249.0	355.5	202.8	816.4	161.7	77.5	68.2	209.0	182.7	850.0	76.7	525.7	6,256
1980[1]	306.0	252.0	591.6	252.8	365.2	206.4	782.1	143.9	79.1	64.0	205.0	162.0	865.0	86.7	369.9	6,036
1981[2]	315		625					155		70					360	6,300
1982																

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[1] Preliminary. [2] Estimated. [3] Some secondary metal included. [4] Data prior to 1976 are in THOUSANDS OF SHORT TONS. *Source: Bureau of Mines*

U.S. Mine Production of Recoverable Zinc In Thousands of Metric[4] Tons

Year	Arizona	Colorado	Idaho	Illinois	Missouri	Montana	Pennsylvania	New Mexico	New York	New Jersey	Tennessee	Utah	Virginia	Washington	Wisconsin	Total U.S.
1969	9.0	53.7	55.9	13.8	41.1	6.1	33.0	24.3	58.7	25.1	124.5	34.9	18.7	9.7	22.9	553.1
1970	9.6	56.7	41.1	16.8	50.7	1.5	29.6	16.6	58.6	28.7	118.3	34.7	18.1	12.0	20.6	534.1
1971	7.8	61.2	45.1	12.7	48.2	.4	27.4	14.0	63.4	30.0	119.3	25.7	16.8	5.8	10.6	502.5
1972	10.1	63.8	38.6	11.4	61.9	—	18.3	12.7	60.7	38.1	101.7	21.9	16.8	6.5	6.9	478.3
1973	8.4	58.3	46.1	5.3	82.4	.1	18.9	12.3	81.4	38.0	64.2	16.8	16.7	6.4	8.7	478.9
1974	9.7	49.5	39.5	4.1	92.0	.1	20.3	13.8	93.1	32.8	85.7	12.6	17.2	6.9	8.7	499.9
1975[3]	7.9	44.0	37.1	N.A.	67.9	.1	19.1	10.0	69.5	28.2	75.6	17.8	13.7	N.A.	N.A.	425.8
1976	8.6	45.9	42.3	N.A.	75.8	.1	20.2	N.A.	66.8	30.6	74.9	20.4	10.2	N.A.	N.A.	439.5
1977	4.0	36.5	28.1	N.A.	74.1	.1	20.7	N.A.	64.3	30.4	82.0	16.1	12.0	5.1	N.A.	407.9
1978	N.A.	22.2	32.4	N.A.	59.0	.1	19.1	N.A.	26.5	28.9	87.9	3.5	11.0	N.A.	N.A.	302.7
1979	N.A.	9.9	29.7	N.A.	61.7	.1	21.4	N.A.	12.1	31.1	85.1	N.A.	11.4	—	N.A.	267.3
1980[1]	N.A.	13.8	27.7	N.A.	65.2	.1	22.6	N.A.	33.6	28.9	128.7	—	12.0	—	—	334.9
1981[2]		16.2	31.9		52.9	—	22.7			16.2	115.4		9.3			305.3
1982																

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[1] Preliminary. [2] Estimated. [3] Data prior to 1975 are in THOUSANDS OF SHORT TONS. *Source: Bureau of Mines*

Consumption of Slab Zinc in the United States, by Industries and Grades In Thousands of Metric[4] Tons

		By Industries							By Grades					
Year	Total	Galvanizers	Brass Products	Zinc-Base Alloy[2]	Rolled Zinc	Oxide Zinc	Light-Metal Alloys	Other	Special High Grade	High Grade	Intermediate	Brass Special	Prime Western	Remelt
1969	1,385.4	493.4	179.5	576.4	48.7	41.4	— 46.0 —		691.0	137.8	7.6	128.2	338.1	5.6
1970	1,187.0	474.2	127.7	463.6	41.1	43.8	— 36.4 —		647.6	126.0	10.0	92.5	309.9	.9
1971	1,254.1	474.8	150.5	516.1	38.9	40.0	— 33.8 —		683.7	133.1	10.0	102.5	328.0	1.8
1972	1,418.3	518.2	192.1	579.8	45.2	52.0	— 31.0 —		684.7	147.1	19.0	129.9	397.2	.7
1973	1,503.9	563.8	197.7	598.7	40.8	61.7	— 2.93 —		739.4	167.5	37.4	132.1	426.6	.9
1974	1,287.7	523.3	181.6	440.3	39.4	65.4	— 37.8 —		572.9	153.1	26.3	122.1	412.1	1.2
1975[4]	839.4	341.9	104.6	303.2	24.8	35.4	5.3	24.3	397.5	75.7	12.9	71.8	280.9	.7
1976	1,028.9	392.9	150.8	387.4	27.1	35.4	5.2	30.1	500.1	101.1	21.0	94.8	310.7	1.2
1977	999.5	396.4	128.3	367.1	27.4	38.5	5.6	36.1	492.6	91.0	19.7	101.2	293.7	1.2
1978	1,050.6	454.0	141.5	354.1	24.9	37.2	11.0	27.8	491.3	109.7	21.8	98.4	327.7	1.7
1979	1,000.6	452.8	141.4	314.1	22.0	35.5	12.9	21.9	443.1	108.6	22.5	86.8	336.8	2.8
1980[3]	811.1	379.2	98.8	254.2	21.1	27.0	11.1	19.6	354.3	76.2	—88.8—		290.3	1.6
1981[1]	834.7	369.2	110.8	209.2	23.2	19.0	— 21.3 —							
1982														

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[1] Estimated. [2] Die Casters. [3] Preliminary. [4] Data prior to 1975 are in THOUSANDS OF SHORT TONS. *Source: Bureau of Mines*

Zinc Foreign Trade of the United States In Metric[4] Tons

Year	Imported for Consumption							Zinc Ore & Manufactures Exported						
								Blocks, Pigs, Anodes, etc.		Wrought & Alloys				
	Ores[1]	Blocks, Pigs, Slabs	Zinc Fume	Waste & Scrap	Dross, & Skimmings	Dust, Powder & Flakes	Total Value Thous. $	Unwrought	Unwrought Alloys	Sheets, Plates & Strips	Angles Bars, Rods, etc.	Waste & Scrap	Dust (Blue Powder)	Zinc Ore & Concentrates
1973	154,174	590,751	17,953	1,544	2,328	4,873	304,871	10,574	14,566	2,480	4,503	6,366	666	
1974	133,733	543,806	18,235	2,418	3,863	9,131	479,357	18,865	19,062	3,487	9,591	10,936	1,152	
1975	428,544	374,922	33,327	1,418	3,158	5,739	399,857	2,730	6,897	1,628	11,466	4,448	603	
1976	155,803	695,131	6,927	1,803	12,445	6,009	546,239	1,593	3,513	2,271	7,727	8,171	774	
1977[4]	109,277	503,621	233	9,188	11,739	6,702	411,414	215	899	2,432	4,677	7,445	928	N.A.
1978	106,315	622,470	60	3,310	7,436	8,978	434,376	723	554	2,262	860	14,986	1,803	10,973
1979	87,499	524,130	28	3,259	4,454	3,586	434,677	279	366	1,824	1,451	28,149	966	20,095
1980[2]	182,370	410,163	25	3,470	4,062	3,928	401,134	302	485	2,103	804	29,542	4,512	54,457
1981[3]	245,709	612,007	184	5,782	7,629	7,994		324				30,912		48,248

[1] Zinc content. [2] Preliminary. [3] Estimate. [4] Data prior to 1977 are in SHORT TONS. *Source: Bureau of Mines*

Smelter Production of Slab Zinc[1] in the United States (Includes GSA Metal) In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1973	61.8	56.1	63.1	60.5	59.6	52.6	55.1	55.3	56.9	57.0	54.6	55.3	687.9
1974	50.4	48.8	52.1	47.7	51.5	48.4	49.2	44.7	46.2	49.9	51.5	49.8	590.2
1975	52.1	45.0	45.1	42.7	34.1	29.7	26.9	28.0	32.2	33.5	35.7	40.9	445.9
1976	45.8	45.3	47.2	46.5	47.5	45.3	45.0	39.9	40.6	46.6	41.2	45.1	536.0
1977	45.6	39.6	43.6	42.9	37.2	31.9	26.8	25.4	26.0	34.2	40.0	40.9	434.1
1978	39.2	33.0	30.4	33.5	35.7	34.5	34.5	37.6	37.3	44.2	42.4	42.6	444.8
1979	45.7	46.1	52.9	51.1	49.9	43.0	44.0	42.0	39.8	46.0	43.4	33.5	537.4
1980	30.5	30.6	34.8	32.1	31.9	28.5	20.8	26.7	28.6	31.0	29.9	33.2	358.6
1981	33.4	31.5	34.5	34.1	32.2	30.8	33.0	33.5	29.4	29.8	29.3	25.3	376.8
1982	26.7	23.8	23.6	21.3									

[1] Smelter & refinery production from domestic & foreign ores. *Source: American Bureau of Metal Statistics, Inc.*

Domestic Shipments of Slab Zinc[1] in the United States In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1972	67.1	73.5	74.0	68.0	75.5	74.4	63.2	71.4	56.6	65.7	65.0	60.2	814.6
1973	63.6	62.5	67.0	64.8	65.2	58.3	59.2	59.8	55.6	57.8	59.1	53.7	726.5
1974	50.1	57.7	58.3	60.2	63.1	54.0	56.8	55.6	52.0	52.7	45.1	38.3	643.9
1975	30.8	23.6	23.1	35.2	33.8	37.1	44.9	45.0	44.8	40.4	29.0	34.2	421.7
1976	39.8	44.1	54.3	46.0	47.9	43.6	41.2	48.3	46.1	33.0	31.2	39.0	514.6
1977	44.0	45.9	68.9	33.8	26.2	33.5	29.2	35.6	31.0	33.5	35.0	40.4	457.1
1978	40.7	34.5	36.3	40.3	44.8	42.9	35.1	42.0	34.7	47.3	36.4	37.1	472.2
1979	44.2	47.9	53.5	44.1	47.7	44.5	37.4	35.7	40.3	47.3	33.7	37.9	514.3
1980	44.5	44.2	36.8	32.7	26.4	22.6	21.5	33.4	34.0	37.6	32.7	33.3	399.6
1981	35.6	31.1	32.3	37.4	32.6	30.2	30.0	31.5	30.8	24.3	21.4	22.0	359.2
1982	24.4	18.8	22.9	23.4									

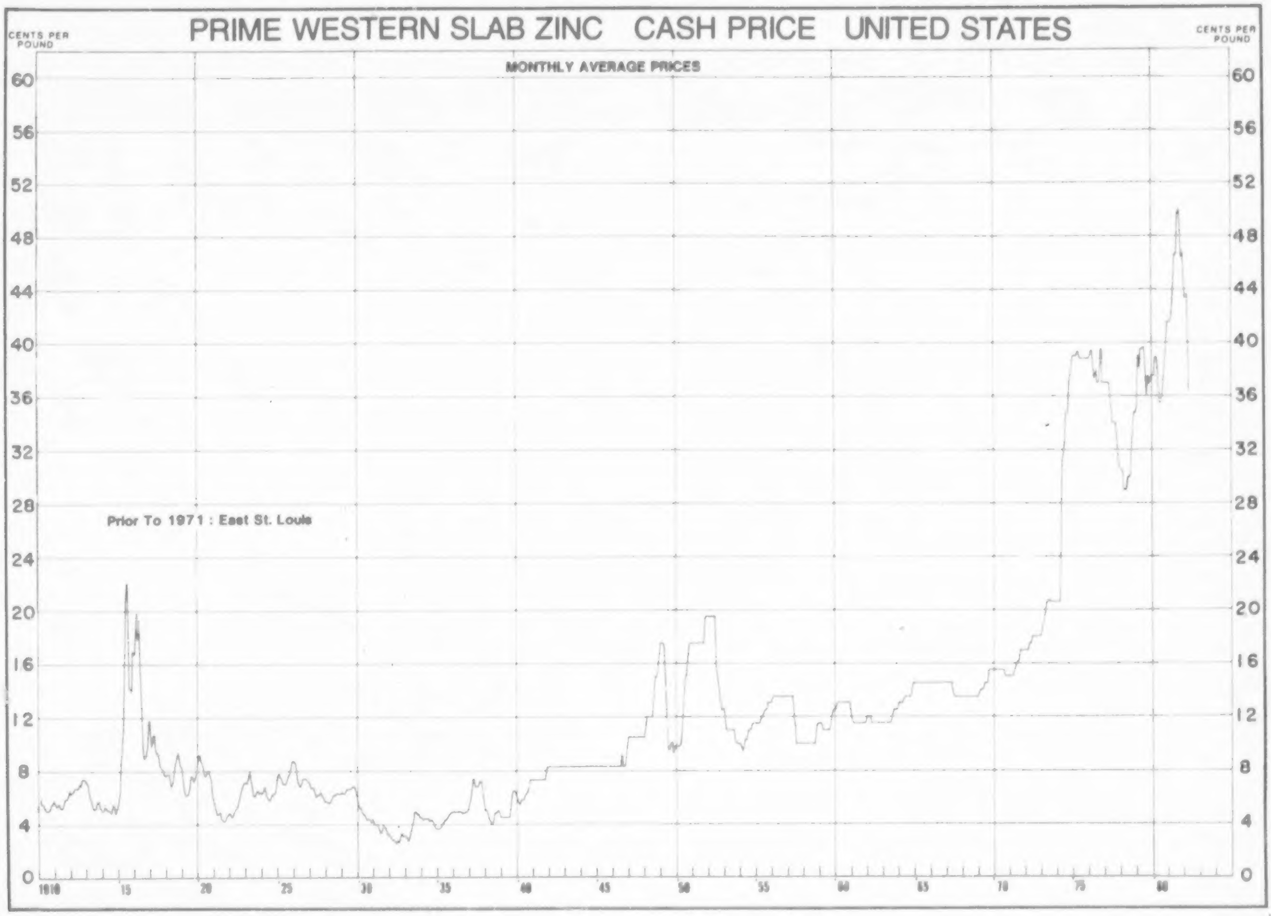
[1] Does not include export shipments & Gov't. account shipments. *Source: American Bureau of Metal Statistics, Inc.*

Stocks of Slab Zinc[1] (at Smelter) in the United States, at End of Month In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1972	50.5	37.8	29.4	23.4	21.2	21.3	26.7	23.5	28.0	31.2	32.3	31.8
1973	32.7	31.3	30.4	28.1	24.6	22.2	25.1	27.4	32.3	31.6	29.7	29.3
1974	29.8	25.1	22.9	18.8	17.6	19.1	19.6	18.1	20.3	22.3	30.9	42.9
1975	64.4	86.0	108.0	115.7	116.0	108.6	90.5	73.5	61.0	54.0	60.7	67.4
1976	73.4	74.6	67.5	68.0	67.6	69.3	73.0	64.6	59.1	72.6	82.7	88.8
1977	90.5	84.2	58.9	67.9	78.9	77.3	74.9	64.7	59.7	60.3	65.3	65.8
1978	64.3	62.8	56.9	50.0	40.9	32.5	31.8	27.4	30.1	26.9	32.9	38.4
1979	39.9	38.0	37.5	44.5	46.7	45.1	51.8	58.1	57.5	56.3	66.0	61.5
1980	47.5	34.0	31.9	31.4	36.8	42.8	42.1	35.4	30.1	23.4	20.6	20.6
1981	18.4	18.8	20.9	17.6	17.2	17.9	20.9	22.9	21.5	27.0	34.9	38.1
1982	40.4	45.4	46.1	44.0								

[1] Figures include zinc produced from foreign ores as well as domestic ores. *Source: American Bureau of Metal Statistics, Inc.*

ZINC



Average Price of Zinc, Prime Western Slab (Delivered U.S. Basis[1]) In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1969	13.84	14.00	14.00	14.02	14.50	14.50	14.50	14.50	15.38	15.50	15.50	15.50	14.65
1970	15.50	15.50	15.50	15.50	15.50	15.50	15.50	15.33	15.00	15.00	15.00	15.00	15.32
1971[1]	15.00	15.00	15.16	15.50	15.81	16.00	16.21	17.00	17.00	17.00	17.00	17.00	16.14
1972	17.00	17.00	17.26	17.50	17.89	18.00	18.00	18.00	18.00	18.00	18.00	18.09	17.73
1973	18.58	19.25	19.83	20.46	20.63	20.70	20.63	20.63	20.63	20.63	20.63	27.46	20.84
1974	31.18	31.75	32.70	34.75	34.75	35.25	36.97	38.00	38.95	39.00	39.00	39.00	35.94
1975	39.25	39.07	38.75	38.75	38.75	38.75	38.75	38.75	38.75	39.66	38.75	38.75	38.89
1976	37.26	37.00	37.00	37.00	37.00	37.00	37.00	38.75	39.50	37.00	37.00	37.00	37.38
1977	37.00	37.00	37.00	37.00	35.64	34.00	34.00	34.00	34.00	31.74	30.66	30.50	35.21
1978	30.50	30.26	29.00	29.00	29.00	29.95	30.00	31.92	32.75	33.66	34.75	34.75	31.30
1979	35.00	36.90	38.09	39.50	39.50	39.55	39.63	36.82	36.03	37.50	36.88	37.50	37.74
1980	37.50	38.70	38.92	38.50	37.50	36.55	35.50	35.98	37.46	38.48	39.69	41.63	38.03
1981	41.63	41.63	42.13	43.73	46.55	46.63	46.67	49.74	49.88	46.41	46.75	43.65	45.45
1982	43.31	43.56	43.56	36.39									
1983													

[1] Prior to 1971, prices are for delivered E. St. Louis. *Source: American Metal Market*

Conversion Factors

The following equivalents are among those most commonly used in international agricultural trade:

METRIC EQUIVALENTS

1 meter	(m)	equals	39.37	inches
1 hectare	(ha)	equals	2.471	acres
1 liter	(l)	equals	.9081	dry quarts, or
		equals	1.0567	liquid quarts
1 kilogram	(kg)	equals	2.204622	pounds
1 quintal	(100 kgs)	equals	220.462	pounds
1 tonne	(1,000 kgs)	equals	2,204.622	pounds

Bushel weights:
Wheat & soybeans = 60 lbs.
Corn, sorghum & rye = 56 lbs.
Barley (grain) = 48 lbs.; Barley (malt) = 34 lbs.
Oats = 32 lbs.; Rapeseed = 50 lbs.

Bushels to metric tons:
Wheat & soybeans = bushels × .027216
Barley = bushels × .021772
Corn, sorghum, rye = bushels × .025400
Oats = bushels × .014515

1 metric ton equals:
2204.622 lbs.
22.046 hundredweight
10 quintals

One metric ton (tonne) 1,000 kilograms =
36.7437 bushels wheat or soybeans
39.3679 bushels corn, sorghum, rye, flaxseed
45.9296 bushels barley
68.8944 bushels oats
44.092 rapeseed
22.046 cwt. rice

Area:
1 Acre = .404694 hectares
1 Hectare = 2.4710 acres

Yields:
Wheat = bushels per acre × 0.6725 = quintals per hectare
Rye, corn = bushels per acre × 0.6277 = quintals per hectare
Barley = bushels per acre × 0.5380 = quintals per hectare
Oats = bushels per acre × 0.3587 = quintals per hectare

APPROXIMATE CONVERSIONS FROM CUSTOMARY TO METRIC AND VICE VERSA

	When you know:	*You can find:*	*If you multiply by:*
LENGTH	inches	millimeters	25
	feet	centimeters	30
	yards	meters	0.9
	miles	kilometers	1.6
	millimeters	inches	0.04
	centimeters	inches	0.4
	meters	yards	1.1
	kilometers	miles	0.6
AREA	square inches	square centimeters	6.5
	square feet	square meters	0.09
	square yards	square meters	0.8
	square miles	square kilometers	2.6
	acres	square hectometers (hectares)	0.4
	square centimeters	square inches	0.16
	square meters	square yards	1.2
	square kilometers	square miles	0.4
	square hectometers (hectares)	acres	2.5
MASS	ounces	grams	28
	pounds	kilograms	0.45
	short tons	megagrams (metric tons)	0.9
	grams	ounces	0.035
	kilograms	pounds	2.2
	megagrams (metric tons)	short tons	1.1
LIQUID VOLUME	ounces	milliliters	30
	pints	liters	0.47
	quarts	liters	0.95
	gallons	liters	3.8
	milliliters	ounces	0.034
	liters	pints	2.1
	liters	quarts	1.06
	liters	gallons	0.26
TEMPERATURE	degrees Fahrenheit	degrees Celsius	5/9 (after subtracting 32)
	degrees Celsius	degrees Fahrenheit	9/5 (then add 32)

Source: U.S. Department of Commerce